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Scientific and Technical Information Center

SEARCH REQUEST FORM

Requester's Full Name: Sabiha Qazi Examiner # : 74141 Date: 8/26/03
Art Unit: 1616 Phone Number: 2-0622 Serial Number: 10/031,225
Location (Bldg/Room#): 4A45 (Mailbox #): 4C70 Results Format Preferred (circle): PAPER DISK
****

To ensure an efficient and quality search, please attach a copy of the cover sheet, claims, and abstract or fill out the following:

Title of Invention: Rest Breaking Composition + use thereof
Inventors (please provide full names): Brian P. McDonald et al

Earliest Priority Date: 371 of PCT/EP00/06235 7/16/1999

Search Topic:
Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known.

For Sequence Searches Only *Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Cl 10-26
Please search for the composition of Cl 10. Containing choline salt or organic nitrogen containing compd selected from (compds are listed), an inorganic nitrate rest-breaking agent (see cl 15 for example) and a surfactant

Please see attached sheet

Thank you

****

STAFF USE ONLY	Type of Search	Vendors and cost where applicable
Searcher: _____	____ NA Sequence (#)	____ STN ____ Dialog
Searcher Phone #: _____	____ AA Sequence (#)	____ Questel/Orbit ____ Lexis/Nexis
Searcher Location: _____	____ Structure (#)	____ Westlaw ____ WWW/Internet
Date Searcher Picked Up: _____	____ Bibliographic	____ In-house sequence systems
Date Completed: _____	____ Litigation	____ Commercial ____ Oligomer ____ Score/Length ____ Interference ____ SPDI ____ Encode/Transl ____ Other (specify)
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Online Time: _____	____ Other	

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=> fil reg
FILE 'REGISTRY' ENTERED AT 13:01:49 ON 19 SEP 2005
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Property values tagged with IC are from the ZIC/VINITI data file
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STRUCTURE FILE UPDATES:   18 SEP 2005  HIGHEST RN 863382-78-9
DICTIONARY FILE UPDATES:  18 SEP 2005  HIGHEST RN 863382-78-9

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TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

*********************************************************************
*                                                                   *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added,   *
* effective March 20, 2005.  A new display format, IDERL, is now    *
* available and contains the CA role and document type information. *
*                                                                   *
*********************************************************************

Structure search iteration limits have been increased.  See HELP SLIMITS
for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
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=> fil zcap
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=> fil hcap
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FILE COVERS 1907 - 19 Sep 2005  VOL 143 ISS 13
FILE LAST UPDATED: 18 Sep 2005  (20050918/ED)

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=> fil medlin
FILE 'MEDLINE' ENTERED AT 13:01:57 ON 19 SEP 2005

 FILE LAST UPDATED: 17 SEP 2005 (20050917/UP).  FILE COVERS 1950 TO DATE.

 On December 19, 2004, the 2005 MeSH terms were loaded.

 The MEDLINE reload for 2005 is now available.  For details enter HELP
 RLOAD at an arrow promt (=>).  See also:

    http://www.nlm.nih.gov/mesh/
    http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html

 OLDMEDLINE now back to 1950.

 MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
 MeSH 2005 vocabulary.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=> fil embase
FILE 'EMBASE' ENTERED AT 13:02:01 ON 19 SEP 2005
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 FILE COVERS 1974 TO 15 Sep 2005 (20050915/ED)

 EMBASE has been reloaded. Enter HELP RLOAD for details.

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 substance identification.

=> fil biosis
FILE 'BIOSIS' ENTERED AT 13:02:04 ON 19 SEP 2005
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FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 14 September 2005 (20050914/ED)

FILE RELOADED: 19 October 2003.

=> fil caba
FILE 'CABA' ENTERED AT 13:02:08 ON 19 SEP 2005

FILE COVERS 1973 TO 2 Sep 2005 (20050902/ED)

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=> fil agricola
FILE 'AGRICOLA' ENTERED AT 13:02:13 ON 19 SEP 2005

FILE COVERS 1970 TO 22 Aug 2005 (20050822/ED)

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=> fil frosti
FILE 'FROSTI' ENTERED AT 13:02:21 ON 19 SEP 2005

FILE LAST UPDATED: 14 SEP 2005 <20050914/UP>
FILE COVERS 1972 TO DATE.

>>> SIMULTANEOUS LEFT AND RIGHT TRUNCATION IS AVAILABLE
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=> fil fsta
FILE 'FSTA' ENTERED AT 13:02:25 ON 19 SEP 2005

FILE LAST UPDATED: 19 SEP 2005 <20050919/UP>
FILE COVERS 1969 TO DATE.

=> fil pascal
FILE 'PASCAL' ENTERED AT 13:02:30 ON 19 SEP 2005

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FILE LAST UPDATED: 19 SEP 2005        <20050919/UP>
FILE COVERS 1977 TO DATE.

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    IN THE BASIC INDEX (/BI) FIELD  <<<

=> fil jicst
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=> fil cropu
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 FILE COVERS 1985 TO 2003

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 >>>  EFFECTIVE  JAN 1, 2004, THE 70% DISCOUNT FOR
      DERWENT CROP PROTECTION SUBSCRIBERS WILL BE NO
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FILE LAST LOADED: 11 NOV 94       <941111/UP>
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FILE LAST UPDATED:          15 SEP 2005      <20050915/UP>
MOST RECENT DERWENT UPDATE:     200559        <200559/DW>
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>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,
    PLEASE VISIT:
 http://www.stn-international.de/training_center/patents/stn_guide.pdf <<<

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
    http://thomsonderwent.com/coverage/latestupdates/          <<<
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FOR DETAILS. <<<

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FILE LAST UPDATED: 16 SEP 2005 <20050916/UP>
FILE COVERS 1976 TO DATE.

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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Sep 16, 2005 (20050916/UP).

```
=> d que stat l53
L1             1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  WO2000-EP6234/APPS
L3               TRANSFER  PLU=ON  L1 1- RN :        9 TERMS
L4             9 SEA FILE=REGISTRY ABB=ON  PLU=ON  L3
L5               QUE  ABB=ON  PLU=ON  ?AMMONIA? OR ?AMMONIUM? OR ?CHOLINE?
                  OR ?ETHANIMINE? OR (?ETHYLENE (1A) DIAMIN?) OR EN
L6               QUE  ABB=ON  PLU=ON  ?NITRAT?
L7               QUE  ABB=ON  PLU=ON  ?SURFACTANT? OR ARMOBLEN OR ARMOBREA
                 K OR BEROL OR (SURFACE (1W) AGENT)
L8               QUE  ABB=ON  PLU=ON  REST (3A) (BREAK? OR ?DISRUPT? OR ?I
                 NTERRUPT? OR ?TERMINAT? )
L9             2 SEA FILE=REGISTRY ABB=ON  PLU=ON  L4 AND C>1
L11            7 SEA FILE=REGISTRY ABB=ON  PLU=ON  L4 NOT L9
L12        52952 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "HORMONES, PLANT"+PFT,NT/CT
L13         7980 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "PLANT HORMONES"+PFT,NT/CT
L14        29172 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "PLANT HORMONES AND REGULATORS
                 "+PFT,NT/CT
L15        12518 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "PLANT REGULATORS"+PFT,NT/CT
L17        15649 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "AMINES, USES"+PFT,NT/CT
L18        11839 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "AMINES, USES AND MISCELLANEOU
                 S"+PFT,NT/CT
L19        37355 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "QUATERNARY AMMONIUM COMPOUNDS
                 "+PFT/CT
L20         9858 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "QUATERNARY AMMONIUM COMPOUNDS
                 , USES"+PFT,NT/CT
L21       230473 SEA FILE=HCAPLUS ABB=ON  PLU=ON  SURFACTANTS+PFT,NT/CT
L22       114062 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "CAPILLARY-ACTIVE SUBSTANCES"+
                 PFT,NT/CT
L23            0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "SURFACE-ACTIVE SUBSTANCES
                 (CAPILLARY- OR INTERFACE-ACTIVE SUBSTANCES"+PFT,NT/CT
L24            0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "SURFACE-ACTIVE SUBSTANCES
                 (CAPILLARY- OR INTERFACE- ACTIVE SUBSTANCES"+PFT,NT/CT
L25        13968 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L9
L26          545 SEA FILE=HCAPLUS ABB=ON  PLU=ON  62-49-7D? OR 67-48-1D?
L27         1072 SEA FILE=REGISTRY ABB=ON  PLU=ON  (62-49-7 OR 67-48-1)/RN,CRN
L28        15672 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L27
L29          251 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ((L25 OR L26 OR L27 OR L28)
                 OR (L17 OR L18 OR L19 OR L20)) AND (L12 OR L13 OR L14 OR L15)
L30         1614 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ((L25 OR L26 OR L27 OR L28)
                 OR (L17 OR L18 OR L19 OR L20)) AND (AGROCHEMICAL BIOREGULATORS)
                 /SC,SX
L31            4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ((L25 OR L26 OR L27 OR L28)
                 OR (L17 OR L18 OR L19 OR L20)) (L) L8
L32            5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L29 OR L30) AND L8
L33            5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L31 OR L32)
L34        38426 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L11
L35          250 SEA FILE=REGISTRY ABB=ON  PLU=ON  (10124-37-5/RN,CRN OR
                 15245-12-2/RN,CRN OR 15978-77-5/RN,CRN OR 316373-41-8/RN,CRN
                 OR 6484-52-2/RN,CRN OR 73376-28-0/RN,CRN OR 7757-79-1/RN,CRN)
L36        38763 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L35
L37           20 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L29 OR L30 OR L31) AND (L34
                 OR L36)
L38           15 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L37 NOT L33
L39           12 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L38 AND (AGROCHEMICAL
                 BIOREGULATORS)/SC
L41           12 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L34 OR L36) AND L8
L42              QUE  ABB=ON  PLU=ON  (REST OR DORMANT OR DORMANC?)(5A) (B
                 REAK? OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT? )
L44           24 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L34 OR L36) (L) L42
L45            9 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L25 OR L26 OR L28 OR (L17 OR
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              L18 OR L19 OR L20)) AND L42
L46           5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L21 OR L22 OR L23 OR L24)
                AND L42
L49          33 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L44 OR L45 OR L46)
L50          44 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L49 OR L33 OR L39
L51          47 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L50 OR L41
L52          47 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L51 AND (L5 OR L6 OR L7 OR L8
                OR L42)
L53          35 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L52 AND (AY<2000 OR PY<2000
                OR PRY<2000)


=> d que stat l54
L1            1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  WO2000-EP6234/APPS
L3              TRANSFER  PLU=ON  L1 1- RN :       9 TERMS
L4            9 SEA FILE=REGISTRY ABB=ON  PLU=ON  L3
L5              QUE  ABB=ON  PLU=ON  ?AMMONIA? OR ?AMMONIUM? OR ?CHOLINE?
                 OR ?ETHANIMINE? OR (?ETHYLENE (1A) DIAMIN?) OR EN
L6              QUE  ABB=ON  PLU=ON  ?NITRAT?
L7              QUE  ABB=ON  PLU=ON  ?SURFACTANT? OR ARMOBLEN OR ARMOBREA
                K OR BEROL OR (SURFACE (1W) AGENT)
L8              QUE  ABB=ON  PLU=ON  REST (3A) (BREAK? OR ?DISRUPT? OR ?I
                NTERRUPT? OR ?TERMINAT? )
L9            2 SEA FILE=REGISTRY ABB=ON  PLU=ON  L4 AND C>1
L11           7 SEA FILE=REGISTRY ABB=ON  PLU=ON  L4 NOT L9
L12       52952 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "HORMONES, PLANT"+PFT,NT/CT
L13        7980 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "PLANT HORMONES"+PFT,NT/CT
L14       29172 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "PLANT HORMONES AND REGULATORS
                "+PFT,NT/CT
L15       12518 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "PLANT REGULATORS"+PFT,NT/CT
L17       15649 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "AMINES, USES"+PFT,NT/CT
L18       11839 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "AMINES, USES AND MISCELLANEOU
                S"+PFT,NT/CT
L19       37355 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "QUATERNARY AMMONIUM COMPOUNDS
                "+PFT/CT
L20        9858 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "QUATERNARY AMMONIUM COMPOUNDS
                , USES"+PFT,NT/CT
L21      230473 SEA FILE=HCAPLUS ABB=ON  PLU=ON  SURFACTANTS+PFT,NT/CT
L22      114062 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "CAPILLARY-ACTIVE SUBSTANCES"+
                PFT,NT/CT
L23           0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "SURFACE-ACTIVE SUBSTANCES
                (CAPILLARY- OR INTERFACE-ACTIVE SUBSTANCES"+PFT,NT/CT
L24           0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "SURFACE-ACTIVE SUBSTANCES
                (CAPILLARY- OR INTERFACE- ACTIVE SUBSTANCES"+PFT,NT/CT
L25       13968 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L9
L26         545 SEA FILE=HCAPLUS ABB=ON  PLU=ON  62-49-7D? OR 67-48-1D?
L27        1072 SEA FILE=REGISTRY ABB=ON  PLU=ON  (62-49-7 OR 67-48-1)/RN,CRN
L28       15672 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L27
L29         251 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ((L25 OR L26 OR L27 OR L28)
                OR (L17 OR L18 OR L19 OR L20)) AND (L12 OR L13 OR L14 OR L15)
L30        1614 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ((L25 OR L26 OR L27 OR L28)
                OR (L17 OR L18 OR L19 OR L20)) AND (AGROCHEMICAL BIOREGULATORS)
                /SC,SX
L31           4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ((L25 OR L26 OR L27 OR L28)
                OR (L17 OR L18 OR L19 OR L20)) (L) L8
L32           5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L29 OR L30) AND L8
L33           5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L31 OR L32)
L34       38426 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L11
L35         250 SEA FILE=REGISTRY ABB=ON  PLU=ON  (10124-37-5/RN,CRN OR
                15245-12-2/RN,CRN OR 15978-77-5/RN,CRN OR 316373-41-8/RN,CRN
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                OR 6484-52-2/RN,CRN OR 73376-28-0/RN,CRN OR 7757-79-1/RN,CRN)
L36         38763 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L35
L37            20 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L29 OR L30 OR L31) AND (L34
                OR L36)
L38            15 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L37 NOT L33
L39            12 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L38 AND (AGROCHEMICAL
                BIOREGULATORS)/SC
L41            12 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L34 OR L36) AND L8
L42               QUE  ABB=ON  PLU=ON  (REST OR DORMANT OR DORMANC?)(5A) (B
                REAK? OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT? )
L44            24 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L34 OR L36) (L) L42
L45             9 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L25 OR L26 OR L28 OR (L17 OR
                L18 OR L19 OR L20)) AND L42
L46             5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L21 OR L22 OR L23 OR L24)
                AND L42
L49            33 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L44 OR L45 OR L46)
L50            44 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L49 OR L33 OR L39
L51            47 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L50 OR L41
L52            47 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L51 AND (L5 OR L6 OR L7 OR L8
                OR L42)
L53            35 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L52 AND (AY<2000 OR PY<2000
                OR PRY<2000)
L54            12 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L52 NOT L53


=> d que stat l72
L5                QUE  ABB=ON  PLU=ON  ?AMMONIA? OR ?AMMONIUM? OR ?CHOLINE?
                   OR ?ETHANIMINE? OR (?ETHYLENE (1A) DIAMIN?) OR EN
L6                QUE  ABB=ON  PLU=ON  ?NITRAT?
L27           1072 SEA FILE=REGISTRY ABB=ON  PLU=ON  (62-49-7 OR 67-48-1)/RN,CRN
L35            250 SEA FILE=REGISTRY ABB=ON  PLU=ON  (10124-37-5/RN,CRN OR
                15245-12-2/RN,CRN OR 15978-77-5/RN,CRN OR 316373-41-8/RN,CRN
                OR 6484-52-2/RN,CRN OR 73376-28-0/RN,CRN OR 7757-79-1/RN,CRN)
L42               QUE  ABB=ON  PLU=ON  (REST OR DORMANT OR DORMANC?)(5A) (B
                REAK? OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT? )
L58               QUE  ABB=ON  PLU=ON  PLANT? OR TREE? OR FRUIT? OR SEED? O
                R LEAF? OR LEAVES? OR ROOT? OR GRAPE? OR APPLE?
L59            33 SEA FILE=REGISTRY ABB=ON  PLU=ON  L27 AND (MEDLINE OR EMBASE
                OR BIOSIS OR CROPU OR CROPB OR AGRICOLA)/LC
L60            11 SEA FILE=REGISTRY ABB=ON  PLU=ON  L35 AND (MEDLINE OR EMBASE
                OR BIOSIS OR CROPU OR CROPB OR AGRICOLA)/LC
L61               SEL  PLU=ON  L59 1- CHEM :      170 TERMS
L62         30633 SEA FILE=MEDLINE ABB=ON  PLU=ON  L61
L63               SEL  PLU=ON  L60 1- CHEM :       84 TERMS
L64       1283625 SEA FILE=MEDLINE ABB=ON  PLU=ON  L63
L65            89 SEA FILE=MEDLINE ABB=ON  PLU=ON  (L64 OR L6) AND L42
L66            29 SEA FILE=MEDLINE ABB=ON  PLU=ON  (L62 OR L5) AND L42
L70            16 SEA FILE=MEDLINE ABB=ON  PLU=ON  (L65 OR L66) AND L58
L71            15 SEA FILE=MEDLINE ABB=ON  PLU=ON  L70 NOT ATHLETES/TI
L72             4 SEA FILE=MEDLINE ABB=ON  PLU=ON  L71 AND (PY<2000 OR MY<2000)


=> d que stat l73
L5                QUE  ABB=ON  PLU=ON  ?AMMONIA? OR ?AMMONIUM? OR ?CHOLINE?
                   OR ?ETHANIMINE? OR (?ETHYLENE (1A) DIAMIN?) OR EN
L6                QUE  ABB=ON  PLU=ON  ?NITRAT?
L27           1072 SEA FILE=REGISTRY ABB=ON  PLU=ON  (62-49-7 OR 67-48-1)/RN,CRN
L35            250 SEA FILE=REGISTRY ABB=ON  PLU=ON  (10124-37-5/RN,CRN OR
                15245-12-2/RN,CRN OR 15978-77-5/RN,CRN OR 316373-41-8/RN,CRN
                OR 6484-52-2/RN,CRN OR 73376-28-0/RN,CRN OR 7757-79-1/RN,CRN)
```

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L42             QUE  ABB=ON  PLU=ON  (REST OR DORMANT OR DORMANC?)(5A) (B
                REAK? OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT? )
L58             QUE  ABB=ON  PLU=ON  PLANT? OR TREE? OR FRUIT? OR SEED? O
                R LEAF? OR LEAVES? OR ROOT? OR GRAPE? OR APPLE?
L59          33 SEA FILE=REGISTRY ABB=ON  PLU=ON  L27 AND (MEDLINE OR EMBASE
                OR BIOSIS OR CROPU OR CROPB OR AGRICOLA)/LC
L60          11 SEA FILE=REGISTRY ABB=ON  PLU=ON  L35 AND (MEDLINE OR EMBASE
                OR BIOSIS OR CROPU OR CROPB OR AGRICOLA)/LC
L61             SEL  PLU=ON  L59 1- CHEM :     170 TERMS
L62       30633 SEA FILE=MEDLINE ABB=ON  PLU=ON  L61
L63             SEL  PLU=ON  L60 1- CHEM :      84 TERMS
L64     1283625 SEA FILE=MEDLINE ABB=ON  PLU=ON  L63
L65          89 SEA FILE=MEDLINE ABB=ON  PLU=ON  (L64 OR L6) AND L42
L66          29 SEA FILE=MEDLINE ABB=ON  PLU=ON  (L62 OR L5) AND L42
L70          16 SEA FILE=MEDLINE ABB=ON  PLU=ON  (L65 OR L66) AND L58
L71          15 SEA FILE=MEDLINE ABB=ON  PLU=ON  L70 NOT ATHLETES/TI
L72           4 SEA FILE=MEDLINE ABB=ON  PLU=ON  L71 AND (PY<2000 OR MY<2000)
L73          11 SEA FILE=MEDLINE ABB=ON  PLU=ON  L71 NOT L72


=> d que stat l85
L5              QUE  ABB=ON  PLU=ON  ?AMMONIA? OR ?AMMONIUM? OR ?CHOLINE?
                 OR ?ETHANIMINE? OR (?ETHYLENE (1A) DIAMIN?) OR EN
L6              QUE  ABB=ON  PLU=ON  ?NITRAT?
L7              QUE  ABB=ON  PLU=ON  ?SURFACTANT? OR ARMOBLEN OR ARMOBREA
                K OR BEROL OR (SURFACE (1W) AGENT)
L27          1072 SEA FILE=REGISTRY ABB=ON  PLU=ON  (62-49-7 OR 67-48-1)/RN,CRN
L35           250 SEA FILE=REGISTRY ABB=ON  PLU=ON  (10124-37-5/RN,CRN OR
                15245-12-2/RN,CRN OR 15978-77-5/RN,CRN OR 316373-41-8/RN,CRN
                OR 6484-52-2/RN,CRN OR 73376-28-0/RN,CRN OR 7757-79-1/RN,CRN)
L58             QUE  ABB=ON  PLU=ON  PLANT? OR TREE? OR FRUIT? OR SEED? O
                R LEAF? OR LEAVES? OR ROOT? OR GRAPE? OR APPLE?
L59          33 SEA FILE=REGISTRY ABB=ON  PLU=ON  L27 AND (MEDLINE OR EMBASE
                OR BIOSIS OR CROPU OR CROPB OR AGRICOLA)/LC
L60          11 SEA FILE=REGISTRY ABB=ON  PLU=ON  L35 AND (MEDLINE OR EMBASE
                OR BIOSIS OR CROPU OR CROPB OR AGRICOLA)/LC
L74             SEL  PLU=ON  L60 1- CHEM :      84 TERMS
L75     1209621 SEA FILE=EMBASE ABB=ON  PLU=ON  L74
L76             SEL  PLU=ON  L59 1- CHEM :     170 TERMS
L77       26770 SEA FILE=EMBASE ABB=ON  PLU=ON  L76
L78         431 SEA FILE=EMBASE ABB=ON  PLU=ON  (REST OR DORMANT OR DORMANC?)(5
                A) (BREAK? OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT? )
L80          75 SEA FILE=EMBASE ABB=ON  PLU=ON  L78 AND L75
L81           1 SEA FILE=EMBASE ABB=ON  PLU=ON  L77 AND L78
L82          15 SEA FILE=EMBASE ABB=ON  PLU=ON  L78 AND (L6 OR L7 OR L5)
L83           5 SEA FILE=EMBASE ABB=ON  PLU=ON  (L80 OR L81 OR L82) AND (L58
                OR FLOWER? OR BLOOM? OR BUD? OR BLOSSOM? OR SHOOT?)
L84           3 SEA FILE=EMBASE ABB=ON  PLU=ON  L83 NOT (ATHLETES OR HOUSEKEEPI
                NG)/TI
L85           3 SEA FILE=EMBASE ABB=ON  PLU=ON  L84 AND (PY<2000 OR MY<2000)


=> d his l103

     (FILE 'BIOSIS, AGRICOLA, CABA' ENTERED AT 11:51:54 ON 19 SEP 2005)
L103         34 S L102 AND (AY<2000 OR PY<2000 OR PRY<2000 OR MY<2000)

=> d que stat l103
L5              QUE  ABB=ON  PLU=ON  ?AMMONIA? OR ?AMMONIUM? OR ?CHOLINE?
                 OR ?ETHANIMINE? OR (?ETHYLENE (1A) DIAMIN?) OR EN
```

```
L6              QUE  ABB=ON  PLU=ON  ?NITRAT?
L7              QUE  ABB=ON  PLU=ON  ?SURFACTANT? OR ARMOBLEN OR ARMOBREA
                K OR BEROL OR (SURFACE (1W) AGENT)
L27         1072 SEA FILE=REGISTRY ABB=ON  PLU=ON  (62-49-7 OR 67-48-1)/RN,CRN
L35          250 SEA FILE=REGISTRY ABB=ON  PLU=ON  (10124-37-5/RN,CRN OR
                15245-12-2/RN,CRN OR 15978-77-5/RN,CRN OR 316373-41-8/RN,CRN
                OR 6484-52-2/RN,CRN OR 73376-28-0/RN,CRN OR 7757-79-1/RN,CRN)
L42             QUE  ABB=ON  PLU=ON  (REST OR DORMANT OR DORMANC?)(5A) (B
                REAK? OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT? )
L58             QUE  ABB=ON  PLU=ON  PLANT? OR TREE? OR FRUIT? OR SEED? O
                R LEAF? OR LEAVES? OR ROOT? OR GRAPE? OR APPLE?
L86             QUE  ABB=ON  PLU=ON  FLOWER? OR BLOOM? OR BUD? OR BLOSSOM
                ? OR SHOOT?
L87           30 SEA FILE=REGISTRY ABB=ON  PLU=ON  L27 AND (CABA OR AGRICOLA OR
                BIOSIS)/LC
L88           11 SEA FILE=REGISTRY ABB=ON  PLU=ON  L35 AND (CABA OR AGRICOLA OR
                BIOSIS)/LC
L89             SEL  PLU=ON  L88 1- CHEM :       84 TERMS
L90     1533573 SEA L89
L91             SEL  PLU=ON  L87 1- CHEM :      165 TERMS
L92       63238 SEA L91
L93         894 SEA L42 AND (L90 OR L6)
L94         227 SEA L42 AND (L92 OR L5)
L95          11 SEA L93 AND L7
L96           2 SEA L94 AND L7
L97          11 SEA L95 OR L96
L98          64 SEA L93 AND L94
L99          64 SEA L98 AND (L58 OR L86)
L100         40 SEA L99 AND (REST OR RESTING OR DORMANT OR DORMANCY)/TI,IT,ST,C
                C,CT,STP
L101         49 SEA L97 OR L100
L102         42 DUP REM L101 (7 DUPLICATES REMOVED)
L103         34 SEA L102 AND (AY<2000 OR PY<2000 OR PRY<2000 OR MY<2000)

=> d his l104

     (FILE 'BIOSIS, AGRICOLA, CABA' ENTERED AT 11:51:54 ON 19 SEP 2005)
L104          8 S L102 NOT L103

=> d que stat l104
L5              QUE  ABB=ON  PLU=ON  ?AMMONIA? OR ?AMMONIUM? OR ?CHOLINE?
                 OR ?ETHANIMINE? OR (?ETHYLENE (1A) DIAMIN?) OR EN
L6              QUE  ABB=ON  PLU=ON  ?NITRAT?
L7              QUE  ABB=ON  PLU=ON  ?SURFACTANT? OR ARMOBLEN OR ARMOBREA
                K OR BEROL OR (SURFACE (1W) AGENT)
L27         1072 SEA FILE=REGISTRY ABB=ON  PLU=ON  (62-49-7 OR 67-48-1)/RN,CRN
L35          250 SEA FILE=REGISTRY ABB=ON  PLU=ON  (10124-37-5/RN,CRN OR
                15245-12-2/RN,CRN OR 15978-77-5/RN,CRN OR 316373-41-8/RN,CRN
                OR 6484-52-2/RN,CRN OR 73376-28-0/RN,CRN OR 7757-79-1/RN,CRN)
L42             QUE  ABB=ON  PLU=ON  (REST OR DORMANT OR DORMANC?)(5A) (B
                REAK? OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT? )
L58             QUE  ABB=ON  PLU=ON  PLANT? OR TREE? OR FRUIT? OR SEED? O
                R LEAF? OR LEAVES? OR ROOT? OR GRAPE? OR APPLE?
L86             QUE  ABB=ON  PLU=ON  FLOWER? OR BLOOM? OR BUD? OR BLOSSOM
                ? OR SHOOT?
L87           30 SEA FILE=REGISTRY ABB=ON  PLU=ON  L27 AND (CABA OR AGRICOLA OR
                BIOSIS)/LC
L88           11 SEA FILE=REGISTRY ABB=ON  PLU=ON  L35 AND (CABA OR AGRICOLA OR
                BIOSIS)/LC
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L89             SEL  PLU=ON  L88 1- CHEM :       84 TERMS
L90      1533573 SEA L89
L91             SEL  PLU=ON  L87 1- CHEM :      165 TERMS
L92        63238 SEA L91
L93          894 SEA L42 AND (L90 OR L6)
L94          227 SEA L42 AND (L92 OR L5)
L95           11 SEA L93 AND L7
L96            2 SEA L94 AND L7
L97           11 SEA L95 OR L96
L98           64 SEA L93 AND L94
L99           64 SEA L98 AND (L58 OR L86)
L100          40 SEA L99 AND (REST OR RESTING OR DORMANT OR DORMANCY)/TI,IT,ST,C
                 C,CT,STP
L101          49 SEA L97 OR L100
L102          42 DUP REM L101 (7 DUPLICATES REMOVED)
L103          34 SEA L102 AND (AY<2000 OR PY<2000 OR PRY<2000 OR MY<2000)
L104           8 SEA L102 NOT L103


=> d his l113

     (FILE 'PASCAL, JICST-EPLUS, FROSTI, FSTA, CROPU, CROPB, SCISEARCH'
     ENTERED AT 11:55:20 ON 19 SEP 2005)
L113          13 DUP REM L112 (1 DUPLICATE REMOVED)

=> d que stat l113
L5              QUE  ABB=ON  PLU=ON  ?AMMONIA? OR ?AMMONIUM? OR ?CHOLINE?
                 OR ?ETHANIMINE? OR (?ETHYLENE (1A) DIAMIN?) OR EN
L6              QUE  ABB=ON  PLU=ON  ?NITRAT?
L7              QUE  ABB=ON  PLU=ON  ?SURFACTANT? OR ARMOBLEN OR ARMOBREA
                K OR BEROL OR (SURFACE (1W) AGENT)
L42             QUE  ABB=ON  PLU=ON  (REST OR DORMANT OR DORMANC?)(5A) (B
                REAK? OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT? )
L105         102 SEA L42 AND L6
L106         166 SEA L42 AND L5
L107          16 SEA L42 AND L7
L108           6 SEA ((L105 OR L106)) AND L7
L109          16 SEA L107 OR L108
L110          16 SEA L105 AND L106
L111          27 SEA (L109 OR L110)
L112          14 SEA L111 AND (AY<2000 OR PY<2000 OR PRY<2000 OR MY<2000)
L113          13 DUP REM L112 (1 DUPLICATE REMOVED)


=> d his l115

     (FILE 'PASCAL, JICST-EPLUS, FROSTI, FSTA, CROPU, CROPB, SCISEARCH'
     ENTERED AT 11:55:20 ON 19 SEP 2005)
L115           2 DUP REM L114 (2 DUPLICATES REMOVED)

=> d que stat l115
L5              QUE  ABB=ON  PLU=ON  ?AMMONIA? OR ?AMMONIUM? OR ?CHOLINE?
                 OR ?ETHANIMINE? OR (?ETHYLENE (1A) DIAMIN?) OR EN
L6              QUE  ABB=ON  PLU=ON  ?NITRAT?
L7              QUE  ABB=ON  PLU=ON  ?SURFACTANT? OR ARMOBLEN OR ARMOBREA
                K OR BEROL OR (SURFACE (1W) AGENT)
L42             QUE  ABB=ON  PLU=ON  (REST OR DORMANT OR DORMANC?)(5A) (B
                REAK? OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT? )
L105         102 SEA L42 AND L6
L106         166 SEA L42 AND L5
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L107          16 SEA L42 AND L7
L108           6 SEA ((L105 OR L106)) AND L7
L109          16 SEA L107 OR L108
L110          16 SEA L105 AND L106
L111          27 SEA (L109 OR L110)
L112          14 SEA L111 AND (AY<2000 OR PY<2000 OR PRY<2000 OR MY<2000)
L114           4 SEA L111 NOT L112
L115           2 DUP REM L114 (2 DUPLICATES REMOVED)


=> d que l132
L116         565 SEA FILE=WPIX ABB=ON  PLU=ON  ((REST OR RESTING? OR DORMANT OR
                 DORMANC?)(5A) (BREAK? OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT?
                 ))/BIX
L117        8883 SEA FILE=WPIX ABB=ON  PLU=ON  (B05-C01 OR B05-C02 OR C05-C01
                 OR C05-C02)/MC
L118        5915 SEA FILE=WPIX ABB=ON  PLU=ON  (B12-M09 OR C12-M09)/MC
L123           2 SEA FILE=WPIX ABB=ON  PLU=ON  L116 AND L117
L124           9 SEA FILE=WPIX ABB=ON  PLU=ON  L116 AND (?AMMONIA?/BIX OR
                 ?AMMONIUM?/BIX OR ?CHOLINE?/BIX OR ?ETHANIMINE?/BIX OR
                 (?ETHYLENE/BIX (1A) DIAMIN?/BIX) OR EN/BIX)
L125           4 SEA FILE=WPIX ABB=ON  PLU=ON  L116 AND (?NITRAT?/BIX)
L126           4 SEA FILE=WPIX ABB=ON  PLU=ON  L123 OR L125
L127           1 SEA FILE=WPIX ABB=ON  PLU=ON  L116 AND L118
L128           9 SEA FILE=WPIX ABB=ON  PLU=ON  (L123 OR L124 OR L125 OR L126 OR
                 L127)
L129        7543 SEA FILE=WPIX ABB=ON  PLU=ON  (C10-A22 OR B10-A22)/MC
L130           4 SEA FILE=WPIX ABB=ON  PLU=ON  L116 AND L129
L131          10 SEA FILE=WPIX ABB=ON  PLU=ON  L128 OR L130
L132           9 SEA FILE=WPIX ABB=ON  PLU=ON  L131 AND (AY<2000 OR PY<2000 OR
                 PRY<2000)


=> d que l133
L116         565 SEA FILE=WPIX ABB=ON  PLU=ON  ((REST OR RESTING? OR DORMANT OR
                 DORMANC?)(5A) (BREAK? OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT?
                 ))/BIX
L117        8883 SEA FILE=WPIX ABB=ON  PLU=ON  (B05-C01 OR B05-C02 OR C05-C01
                 OR C05-C02)/MC
L118        5915 SEA FILE=WPIX ABB=ON  PLU=ON  (B12-M09 OR C12-M09)/MC
L123           2 SEA FILE=WPIX ABB=ON  PLU=ON  L116 AND L117
L124           9 SEA FILE=WPIX ABB=ON  PLU=ON  L116 AND (?AMMONIA?/BIX OR
                 ?AMMONIUM?/BIX OR ?CHOLINE?/BIX OR ?ETHANIMINE?/BIX OR
                 (?ETHYLENE/BIX (1A) DIAMIN?/BIX) OR EN/BIX)
L125           4 SEA FILE=WPIX ABB=ON  PLU=ON  L116 AND (?NITRAT?/BIX)
L126           4 SEA FILE=WPIX ABB=ON  PLU=ON  L123 OR L125
L127           1 SEA FILE=WPIX ABB=ON  PLU=ON  L116 AND L118
L128           9 SEA FILE=WPIX ABB=ON  PLU=ON  (L123 OR L124 OR L125 OR L126 OR
                 L127)
L129        7543 SEA FILE=WPIX ABB=ON  PLU=ON  (C10-A22 OR B10-A22)/MC
L130           4 SEA FILE=WPIX ABB=ON  PLU=ON  L116 AND L129
L131          10 SEA FILE=WPIX ABB=ON  PLU=ON  L128 OR L130
L132           9 SEA FILE=WPIX ABB=ON  PLU=ON  L131 AND (AY<2000 OR PY<2000 OR
                 PRY<2000)
L133           1 SEA FILE=WPIX ABB=ON  PLU=ON  L131 NOT L132


=> dup rem l53 l72 l85 l103 l132 l113
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PROCESSING COMPLETED FOR L72
PROCESSING COMPLETED FOR L85
PROCESSING COMPLETED FOR L103
PROCESSING COMPLETED FOR L132
PROCESSING COMPLETED FOR L113
L152            89 DUP REM L53 L72 L85 L103 L132 L113 (9 DUPLICATES REMOVED)
                   ANSWERS '1-35' FROM FILE HCAPLUS
                   ANSWERS '36-39' FROM FILE MEDLINE
                   ANSWERS '40-42' FROM FILE EMBASE
                   ANSWERS '43-51' FROM FILE BIOSIS
                   ANSWERS '52-53' FROM FILE AGRICOLA
                   ANSWERS '54-74' FROM FILE CABA
                   ANSWERS '75-78' FROM FILE WPIX
                   ANSWERS '79-81' FROM FILE PASCAL
                   ANSWERS '82-85' FROM FILE JICST-EPLUS
                   ANSWER '86' FROM FILE FSTA
                   ANSWERS '87-88' FROM FILE CROPB
                   ANSWER '89' FROM FILE SCISEARCH

=> dup rem l54 l73 l104 l133 l115
PROCESSING COMPLETED FOR L54
PROCESSING COMPLETED FOR L73
PROCESSING COMPLETED FOR L104
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PROCESSING COMPLETED FOR L133
PROCESSING COMPLETED FOR L115
L153          33 DUP REM L54 L73 L104 L133 L115 (1 DUPLICATE REMOVED)
                 ANSWERS '1-12' FROM FILE HCAPLUS
                 ANSWERS '13-23' FROM FILE MEDLINE
                 ANSWER '24' FROM FILE BIOSIS
                 ANSWERS '25-30' FROM FILE CABA
                 ANSWER '31' FROM FILE WPIX
                 ANSWERS '32-33' FROM FILE PASCAL

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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Sep 16, 2005 (20050916/UP).
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=> d l152 ibib ed ab hitind
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, MEDLINE, EMBASE, BIOSIS, AGRICOLA,
CABA, PASCAL, JICST-EPLUS, FSTA, CROPB, SCISEARCH, WPIX' - CONTINUE? (Y)/N:y


L152 ANSWER 1 OF 89  HCAPLUS  COPYRIGHT 2005 ACS on STN DUPLICATE 1
ACCESSION NUMBER:         2001:396597  HCAPLUS
DOCUMENT NUMBER:          135:1669
TITLE:                    Composition for bud dormancy
                          breaking of fruit-bearing plants
INVENTOR(S):              Campa, Camillo
PATENT ASSIGNEE(S):       Valagro S.P.A., Italy
SOURCE:                   PCT Int. Appl., 24 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.            KIND   DATE        APPLICATION NO.          DATE
     ---------------       ----   --------    --------------------     --------
     WO 2001037653          A2    20010531    WO 2000-IT451            20001109 <--
     WO 2001037653          A3    20020110
         W:  AU, BR, MX, NZ, TR, US, ZA
         RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
             PT, SE, TR
     AU 2001018845          A5    20010604    AU 2001-18845            20001109 <--
     EP 1189513             A2    20020327    EP 2000-981616           20001109 <--
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, FI
PRIORITY APPLN. INFO.:                         IT 1999-RM728         A  19991129 <--
                                               WO 2000-IT451         W  20001109

ED   Entered STN:  01 Jun 2001
AB   The invention relates to a composition for stimulating the interruption
     of dormancy of the buds of fruit-bearing plants.  Such composition
     comprises at least a compound selected from Group A and at least a compound
     selected from Group B. Group A consists of alkaline metal or alkaline-earth
metal
     nitrates, ammonium nitrate and other
     ammonium salts. Group B comprises alkene oxide reaction products
     with alkyl phenols, alcs., fatty acids or oils; polyalkylenglycols;
     alkylpolyglucamides; and alkylpolyglucosides.
IC   ICM  A01N
CC   5-3 (Agrochemical Bioregulators)
ST   bud dormancy breaking compn
IT   Nitrates, biological studies
     RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
        (alkaline metal or alkaline-earth metal, mixts. containing; compns. for bud
        dormancy breaking of fruit-bearing plants)
IT   Alcohols, biological studies
     Fatty acids, biological studies
     RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
        (alkoxylated, mixts. with nitrates; compns. for bud
        dormancy breaking of fruit-bearing plants)
IT   Glycosides
     RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
        (alkyl polyglycosides, mixts. with nitrates; compns. for bud
        dormancy breaking of fruit-bearing plants)
IT   Phenols, biological studies
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RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(alkyl, alkoxylated, mixts. with **nitrates**; compns. for bud **dormancy breaking** of fruit-bearing plants)

IT Growth and development, plant
(**dormancy-breaking**; composition for bud **dormancy breaking** of fruit-bearing plants)

IT Polyoxyalkylenes, biological studies
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(mixts. with **nitrates**; compns. for bud **dormancy breaking** of fruit-bearing plants)

IT **6484-52-2D**, **Ammonium nitrate**, mixture with alkyl polyglucosides **10124-37-5D**, Calcium **nitrate**, mixture with alkyl polyglucosides **341486-06-4 341486-07-5 341486-08-6 341486-09-7**
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(composition for bud **dormancy breaking** of fruit-bearing plants)

IT **6484-52-2D**, **Ammonium nitrate**, mixts. containing 7631-99-4D, Sodium **nitrate**, mixts. containing **7757-79-1D**, Potassium **nitrate**, mixts. containing 9016-45-9D, ethoxylated nonylphenol, mixts. with **nitrates 10124-37-5D**, Calcium **nitrate**, mixts. containing 10377-60-3D, Magnesium **nitrate**, mixts. containing
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(compns. for bud **dormancy breaking** of fruit-bearing plants)

=> d l152 ibib ed ab hitind 2-35
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, MEDLINE, EMBASE, BIOSIS, AGRICOLA, CABA, PASCAL, JICST-EPLUS, FSTA, CROPB, SCISEARCH, WPIX' - CONTINUE? (Y)/N:y

L152 ANSWER 2 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2
ACCESSION NUMBER: 2001:63761 HCAPLUS
DOCUMENT NUMBER: 134:96641
TITLE: **Rest-breaking** composition for deciduous fruit trees comprising an organic nitrogen-containing compound.
INVENTOR(S): MacDonald, Brian P.; Workel, Hennie A.
PATENT ASSIGNEE(S): Akzo Nobel N.V., Neth.
SOURCE: PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001005227	A1	20010125	WO 2000-EP6234	20000703 <--

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,

CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

BR 2000012518	A	20020402	BR 2000-12518	20000703 <--
EP 1194038	A1	20020410	EP 2000-949250	20000703 <--
EP 1194038	B1	20030924		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

TR 200200077	T2	20030221	TR 2002-200200077	20000703 <--
NZ 516634	A	20030228	NZ 2000-516634	20000703 <--
AT 250339	E	20031015	AT 2000-949250	20000703 <--
AU 768264	B2	20031204	AU 2000-62680	20000703 <--
PT 1194038	T	20040227	PT 2000-949250	20000703 <--
ES 2207533	T3	20040601	ES 2000-949250	20000703 <--
EG 22491	A	20030331	EG 2000-910	20000715 <--
ZA 2002000360	A	20030415	ZA 2002-360	20020115 <--

PRIORITY APPLN. INFO.: EP 1999-202342 A 19990716 <--
WO 2000-EP6234 W 20000703

ED Entered STN: 26 Jan 2001

AB The invention relates to a composition useful for the **breaking** of **rest** in deciduous fruit species such as apple species and grape species comprising an organic nitrogen-containing compound having a mol. weight of 60 to 300 with the exception of urea and dinitro-ortho-cresol, an inorg. **nitrate rest-breaking** agent, and a **surfactant.** Preferably, the organic nitrogen-containing compound is a **choline** salt such as **choline** chloride, the inorg. **nitrate rest-breaking** agent is selected from the group consisting of potassium **nitrate**, calcium **nitrate**, **ammonium nitrate**, calcium **ammonium nitrate**, urea **ammonium nitrate**, zinc **ammonium nitrate**, and mixts. thereof, and the **surfactant** is an alkoxylated amine such as **Armoblen**, **Armobreak**, and **Berol** compds. or an alkoxylated quaternary **ammonium** compound

IC ICM A01N033-12
ICS A01N033-12; A01N059-16; A01N059-06; A01N059-00; A01N033-08; A01N025-30

CC 5-3 (**Agrochemical Bioregulators**)

ST **nitrate choline** chloride **rest breaking** deciduous fruit tree; hormone plant **rest breaking** apple grape

IT **Amines, uses**
Quaternary ammonium compounds, uses
RL: MOA (Modifier or additive use); USES (Uses)
(alkoxylated; **surfactant** in **rest-breaking** composition for deciduous fruit trees comprising organic nitrogen-containing compound)

IT Fruit tree
(deciduous; **rest-breaking** composition comprising organic nitrogen-containing compound for)

IT Apple
Grape
(**rest-breaking** composition comprising organic nitrogen-containing compound for)

IT **Hormones, plant**
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(**rest-breaking** composition for deciduous fruit trees containing)

IT **6484-52-2, Ammonium nitrate**, biological

studies **7757-79-1**, Potassium **nitrate**, biological
studies **10124-37-5**, Calcium **nitrate 15245-12-2**
, Calcium **ammonium nitrate 15978-77-5**, Urea
ammonium nitrate 73376-28-0, Nitric acid,
ammonium zinc salt
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(**rest-breaking** composition for deciduous fruit trees containing)

IT **62-49-7D**, (2-Hydroxyethyl)**trimethylammonium**, salt
67-48-1, **Choline** chloride **316373-41-8**, GAN
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
(**rest-breaking** composition for deciduous fruit trees containing)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L152 ANSWER 3 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 4
ACCESSION NUMBER: 1997:540454 HCAPLUS
DOCUMENT NUMBER: 127:132288
TITLE: **Rest-breaking** compositions for deciduous fruit trees, comprising activity-promoting additives
INVENTOR(S): Butselaar, Robert Jan
PATENT ASSIGNEE(S): Akzo Nobel N.V., Neth.; Butselaar, Robert Jan
SOURCE: PCT Int. Appl., 27 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9724926	A1	19970717	WO 1996-EP5880	19961220 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9713083	A1	19970801	AU 1997-13083	19961220 <--
ZA 9700024	A	19970711	ZA 1997-24	19970102 <--
PRIORITY APPLN. INFO.:			EP 1996-200018 A	19960104 <--
			WO 1996-EP5880 W	19961220 <--

ED Entered STN: 25 Aug 1997
AB **Rest-breaking** compns. are disclosed comprising at least one **rest-breaking** agent selected from calcium **nitrate**, **ammonium nitrate**, calcium **ammonium nitrate**, urea **ammonium nitrate**, and zinc **ammonium nitrate**, in conjunction with one or more activity promoting additives selected from alkoxylated amines, quaternary **ammonium** compds. and amine oxides. The activity promoting additives enhance the activity of **rest-breaking** agents thereby leading to improvements in

the yields and quality of fruit from deciduous fruit trees in regions which have mild winter weather conditions.

IC ICM A01N033-08
ICS A01N033-12; A01N033-24; A01N059-00; A01N059-06; A01N059-16

CC 5-3 (**Agrochemical Bioregulators**)

ST **rest breaking** compn deciduous fruit tree

IT Amine oxides
Quaternary ammonium compounds, biological studies
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(activity-promoting additive for **rest-breaking** agents for deciduous fruit trees)

IT Fruit tree
(activity-promoting additives for **rest-breaking** agents for deciduous fruit trees)

IT **Hormones, plant**
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(activity-promoting additives for **rest-breaking** agents for deciduous fruit trees)

IT Amines, biological studies
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(alkoxylated; activity-promoting additive for **rest-breaking** agents for deciduous fruit trees)

IT Amines, biological studies
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(diamines, N-tallow alkylalkylenediamines, ethoxylated propoxylated; activity-promoting additive for **rest-breaking** agents for deciduous fruit trees)

IT **6484-52-2**, **Ammonium nitrate**, biological studies **10124-37-5**, Calcium **nitrate 15245-12-2**, Calcium **ammonium nitrate 15978-77-5**, Urea **ammonium nitrate 73376-28-0**
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(activity-promoting additives in **rest-breaking** compns. for deciduous fruit trees)

L152 ANSWER 4 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 5
ACCESSION NUMBER: 1996:126790 HCAPLUS
DOCUMENT NUMBER: 124:168275
TITLE: Activity promoting additives for **rest-breaking** agents
INVENTOR(S): Parr, William John Ernest; Butselaar, Robert Jan; North, Michael Shaun
PATENT ASSIGNEE(S): Akzo-Nobel N.V., Neth.
SOURCE: PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9601049	A1	19960118	WO 1995-EP2575	19950703 <--
W: AU, BR, MX, NZ, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9529266	A1	19960125	AU 1995-29266	19950703 <--
EP 768820	A1	19970423	EP 1995-924966	19950703 <--
R: ES, FR, GR, IT, PT				
BR 9508227	A	19971028	BR 1995-8227	19950703 <--
ZA 9505543	A	19960216	ZA 1995-5543	19950704 <--

US 5885932 A 19990323 US 1997-765330 19970528 <--
PRIORITY APPLN. INFO.: US 1994-270857 A 19940705 <--
WO 1995-EP2575 W 19950703 <--

ED Entered STN: 01 Mar 1996
AB The title additives are alkoxylated amines or alkoxylated quaternary **ammonium** compds. (Markush given), such as **Armobreak** (alkoxylated tallow amine). The **rest-breaking** agents are Dormex, Ca **ammonium nitrate**, urea **ammonium nitrate**, K **nitrate**, K gibberellate, kinetin, IAA or thiourea.,. The process **breaks** the **rest** of bushes, nuts, berries and nondeciduous fruit trees, is disclosed.
IC ICM A01N033-12
ICS A01N033-08; A01N025-30
ICI A01N033-08, A01N061-00, A01N059-24, A01N059-06, A01N059-00, A01N047-28, A01N025-30; A01N033-12, A01N061-00, A01N059-24, A01N059-06, A01N059-00, A01N047-28, A01N025-30
CC 5-3 (**Agrochemical Bioregulators**)
ST plant **rest breaking** agents activity promoters
IT Almond
Blackberry
Chestnut
Cranberry
Grape
Loganberry
Raspberry
Strawberry
Walnut
(activity-promoting additives for **rest-breaking** agents)
IT **Plant hormones and regulators**
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(**rest-breaking** agents; activity-promoting additives for)
IT Amines, biological studies
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(N-tallow alkylalkylenedi-, ethoxylated propoxylated, **Armobreak**; activity promoting additive for **rest-breaking** agents)
IT Currant (Ribes)
(Ribes nigrum, activity-promoting additives for **rest-breaking** agents)
IT Amines, biological studies
Quaternary ammonium compounds, biological studies
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(alkoxylated, activity-promoting additive for **rest-breaking** agents)
IT Currant (Ribes)
(red, activity-promoting additives for **rest-breaking** agents)
IT 62-56-6, Thiourea., biological studies 87-51-4, Iaa, biological studies 125-67-7, Potassium gibberellate 420-04-2, Dormex 525-79-1, Kinetin **7757-79-1**, Potassium **nitrate**, biological studies **15245-12-2**, Calcium **ammonium nitrate** **15978-77-5**, Urea **ammonium nitrate**
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(**rest-breaking** agents; activity-promoting additives for)

L152 ANSWER 5 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 6
ACCESSION NUMBER: 1997:200753 HCAPLUS

DOCUMENT NUMBER: 126:196382
TITLE: Effects of chemicals on bud break of pistachios under mild climate conditions
AUTHOR(S): Kuden, A. B.; Kuden, A.; Nikpeyma, Y.; Kaska, N.
CORPORATE SOURCE: Dept. of Horticulture, Faculty of Agriculture, Univ. of Cukurova, Adana, 01330, Turk.
SOURCE: Acta Horticulturae (**1995**), 419, 91-96
CODEN: AHORA2; ISSN: 0567-7572
PUBLISHER: International Society for Horticultural Science
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 27 Mar 1997
AB KNO3 (2%) and Dormex (1% and 2%) and the combinations of KNO3 and Dormex with **Armobreak** (1%) were used to **break** bud **dormancy** of pistachio cultivars (Antep, Siirt and Ohadi) and Male-1 type. **Armobreak**+Dormex applications was more effective than KNO3 or **Armobreak**+KNO3 applications on **breaking dormancy** of both flower and vegetative buds of Siirt female cultivar. Similar effects were obtained for Male-1 type. Although the chilling requirement of Ohadi cultivar was higher than that of Antep and Siirt cultivars, KNO3 application was more successful on **breaking dormancy** of Ohadi flower buds (Kuden, A.B. et al., 1992).
CC 5-3 (**Agrochemical Bioregulators**)
IT **Amines, uses**
RL: MOA (Modifier or additive use); USES (Uses)
(diamines, N-tallow alkylalkylenediamines, ethoxylated propoxylated; penetration facilitator for chems. to effect bud break of pistachio)
IT 420-04-2, Dormex **7757-79-1**, Potassium **nitrate**, biological studies
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(bud break of pistachio by)

L152 ANSWER 6 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 7
ACCESSION NUMBER: 1994:48007 HCAPLUS
DOCUMENT NUMBER: 120:48007
TITLE: The effects of **dormancy breaking** chemicals on the color changing of "Redcap" peach fruits
AUTHOR(S): Kuden, Ayzin B.; Kaska, Nurettin
CORPORATE SOURCE: Fac. Agric., Univ. Cukurova, Turk.
SOURCE: Doga: Turk Tarim ve Ormancilik Dergisi (**1993**), 17(3), 629-39
CODEN: DTOSEO; ISSN: 1010-7649
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 05 Feb 1994
AB DNOC + mineral oil, KNO3, thiourea (TU), KNO3 + TU, gibberellic acid (GA3), Promalin and hydrogen cyanamid (H2CN2) were used as the **dormancy breaking** agents. The effects of these breaking chems. on fruit rind and flesh color changes were investigated. All the applications and especially, KNO3, KNO3 + TU, TU, mineral oil and Promalin increased the red color of the rind (a* value). On increasing yellow base color of the rind (b* value), mineral oil, KNO3, KNO3 + TU, GA3 and Promalin applications were effective in both exptl. years. Hydrogen cyanamid which was also found effective on this value. The highest a* value for fruit flesh was obtained with GA3 application. For b* value of fruit flesh color KNO3, + TU combination, GA3 and Promalin applications gave good results.
CC 5-3 (Agrochemical Bioregulators)
ST peach color **dormancy breaking** chem

IT Peach
(color of fruit of, **dormancy-breaking** chems. effect on)
IT Plant hormones and regulators
RL: BIOL (Biological study)
(**dormancy-breaking**, peach fruit color response to)
IT 62-56-6, Thiourea, biological studies 77-06-5, Gibberellic acid 420-04-2, Hydrogen cyanamide 534-52-1, DNOC **7757-79-1**, Potassium **nitrate**, biological studies 53663-71-1, Promalin
RL: BIOL (Biological study)
(in **dormancy breaking** in peach, fruit color in relation to)

L152 ANSWER 7 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 8
ACCESSION NUMBER: 1978:33193 HCAPLUS
DOCUMENT NUMBER: 88:33193
TITLE: Composition for **dormancy breaking** in forest seeds
INVENTOR(S): Matschke, Juergen; Scholz, Erhard; Gruenzel, Herrmann; Lehmann, Hans; Neubert, Eberhard
PATENT ASSIGNEE(S): Ger. Dem. Rep.
SOURCE: Ger. (East), 9 pp.
CODEN: GEXXA8
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DD 125601	Z	19770504	DD 1976-192312	19760412 <--
PRIORITY APPLN. INFO.:			DD 1976-192312 A1	19760412 <--

ED Entered STN: 12 May 1984
AB **Dormancy breaking** in forest-tree seeds is achieved by dressing with cationics, such as quaternary compds., pyridylium salts, ethylene oxide adducts, etc. Thus, dressing of Picea sitchensis seeds with N,N-dimethyl-N-butyl-N-(**alkylbenzylammonium** chloride) prior to planting, combined with soil disinfection using Dazomet, increased the percentage of emerging viable seedlings.
IC A01N021-02
CC 5-3 (Agrochemicals)
ST forest tree seed **dormancy breaking**
IT Tree
(forest, **dormancy breaking** in seeds of, by quaternary **ammonium** compds. and other chemicals)
IT Germination
(of forest trees, stimulation of, by quaternary **ammonium** compds. and other chemicals)
IT **Quaternary ammonium compounds, biological studies**
RL: BIOL (Biological study)
(seed dormancy suppression by, of forest trees)
IT Plant hormones and regulators
(seed-dormancy suppressing, of forest trees, quaternary **ammonium** compds. and other chemicals as)

L152 ANSWER 8 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 9
ACCESSION NUMBER: 1978:46240 HCAPLUS
DOCUMENT NUMBER: 88:46240
TITLE: Regeneration from rhizome fragments of Agropyron repens. II. The **breaking** of 'late spring

dormancy' and the influence of chilling and node position on growth from single-node fragments
AUTHOR(S): Leakey, R. R. B.; Chancellor, R. J.; Vince-Prue, D.
CORPORATE SOURCE: Weed Res. Organ., ARC, Yarnton/Oxford, UK
SOURCE: Annals of Applied Biology (1977), 87(3), 433-41
CODEN: AABIAV; ISSN: 0003-4746
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 12 May 1984
AB Expts. were done with rhizome fragments of Agropyron repens with or without "late spring dormancy". Increasing concns. of KNO3 from 1 to 210 ppm successively increased the percentage of buds released from dormancy, but the restriction of shoot extension was significantly lessened only when concns. of N were 50 ppm or more. Solns. of NaNO2, NH4Cl, and glutamic acid [56-86-0] with equal N contents were equally effective in releasing buds from dormancy. Larger amts. of N were required to stimulate growth in basal buds, than in apical buds. Gibberellic acid [77-06-5] and chilling at -2° slightly increased the percentage of growing buds, but did not affect the amount of extension growth, whereas ethephon had no effect. The restoration of regenerative capacity was associated with increased utilization of rhizome sugars. In single-node rhizome fragments with "late spring dormancy", chilling for 2 wk slightly increased the regenerative capacity, but chilling for longer periods decreased it possibly because respiration during the protracted period of chilling depleted rhizome reserves. Chilling also increased the utilization of rhizome carbohydrates during subsequent growth. Node position affected regenerative capacity: buds from the apical end of the rhizomes had the highest regenerative capacity, this being associated with their greater N content. Because the name "late spring dormancy" seems to be inappropriate for this phenomena, the term "Restricted Regenerative Capacity" is proposed.
CC 5-3 (Agrochemicals)
Section cross-reference(s): 11
ST plant hormone **dormancy breaking** Agropyron; carbohydrate nitrogen rhizome dormancy
IT Cold, biological effects
(**dormancy breaking** response to, in Agropyron repens)
IT Carbohydrates, biological studies
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(of Agropyron repens rhizomes, **dormancy breaking** in relation to)
IT Plant growth and development
(**dormancy, breaking** of, by plant regulators, in Agropyron repens)
IT 56-86-0, biological studies 77-06-5 7632-00-0 **7757-79-1**, biological studies
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BIOL (Biological study); USES (Uses)
(**dormancy breaking** response to)

L152 ANSWER 9 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:228643 HCAPLUS
DOCUMENT NUMBER: 134:233079
TITLE: Preparation of water dispersible granules containing paraquat dichloride
INVENTOR(S): Chung, Bong Jin; Kim, Seung Ho; Chung, Kwang Jin; An, Byoung Woo; Kwon, Oh Yeon; Yoo, Hong Jae; Kwon, Yong Woong

PATENT ASSIGNEE(S): Dongbu Hannong Chemical Co., Ltd., S. Korea
SOURCE: PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001020984	A1	20010329	WO 2000-KR1051	20000919 <--
W: CN, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
KR 2001028660	A	20010406	KR 1999-41035	19990922 <--
EP 1213961	A1	20020619	EP 2000-964768	20000919 <--
EP 1213961	B1	20040303		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
JP 2003509444	T2	20030311	JP 2001-524425	20000919 <--
AT 260557	E	20040315	AT 2000-964768	20000919 <--
ES 2216966	T3	20041101	ES 2000-964768	20000919 <--

PRIORITY APPLN. INFO.: KR 1999-41035 A 19990922 <--
WO 2000-KR1051 W 20000919

ED Entered STN: 30 Mar 2001
AB Herbicidal granulated water dispersible composition is prepared by mixing and kneading 5-50 weight% of paraquat dichloride, 5-30 weight% of anionic and/or nonionic **surfactant**, 1-2 weight% of disintegrant (**breakage** promoter) and the **rest** of a carrier, forming granules out of the kneaded mixture using granulator, and drying the granules in a fluidized bed dryer.
IC ICM A01N025-14
CC 5-3 (Agrochemical Bioregulators)
IT **Surfactants**
(anionic; preparation of water dispersible granules containing paraquat dichloride)
IT **Surfactants**
(nonionic; preparation of water dispersible granules containing paraquat dichloride)
IT 57-13-6, Urea, uses 471-34-1, Calcium carbonate, uses 1321-69-3D, Sodium naphthalenesulfonate, formaldehyde condensate 7447-40-7, Potassium chloride, uses 7631-86-9, White carbon, uses 7631-99-4, Sodium **nitrate**, uses 7757-82-6, Sodium sulfate, uses 7783-20-2, **Ammonium** sulfate, uses 9003-11-6, Ethylene oxide propylene oxide copolymer 9003-39-8, Polyvinylpyrrolidone 9005-25-8D, Starch, watersol., uses 12269-78-2, Pyrophyllite (AlH(SiO3)2) 13149-99-0, Octylbenzenesulfonate 14807-96-6, Talc, uses 35655-76-6 68973-78-4, Sodium Octylnaphthalenesulfonate
RL: MOA (Modifier or additive use); USES (Uses)
(preparation of water dispersible granules containing paraquat dichloride)
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L152 ANSWER 10 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:232397 HCAPLUS
DOCUMENT NUMBER: 134:248328
TITLE: Process and liquids for treatment of laver
INVENTOR(S): Managi, Tatsuo; Sugiura, Eiichi
PATENT ASSIGNEE(S): Fuso Kagaku Kogyo K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001086889	A2	20010403	JP 1999-270192	19990924 <--

PRIORITY APPLN. INFO.: JP 1999-270192 19990924 <--
ED Entered STN: 03 Apr 2001
AB Laver is immersed in liqs. (sp. gr. 1.03-1.20, pH 0.5-5.0) containing seawater mixed with iodides, inorg. salts, and acids. Laver treated with a seawater mixture containing malic acid 0.5, NaCl 1, and KI 0.01 weight% for 5 min showed 90-95% control of diatom and no rotting.
IC ICM A01G033-02
ICS A01N059-12
CC 5-2 (**Agrochemical Bioregulators**)
IT **Quaternary ammonium compounds, biological studies**
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(alkylbenzyldimethyl, chlorides, **surfactant**; seawater mixed with iodides, inorg. salts, and acids for laver treatment of control of diseases and diatom)
IT Diatom (Bacillariophyta)
Laver
Seawater
Surfactants
(seawater mixed with iodides, inorg. salts, and acids for laver treatment of control of diseases and diatom)
IT Acids, biological studies
Alkali metal salts
Alkaline earth salts
Carboxylic acids, biological studies
Iodides, biological studies
Polyphosphoric acids
Quaternary ammonium compounds, biological studies
Salts, biological studies
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(seawater mixed with iodides, inorg. salts, and acids for laver treatment of control of diseases and diatom)
IT 50-21-5, Lactic acid, biological studies 64-18-6, Formic acid, biological studies 64-19-7, Acetic acid, biological studies 77-92-9, Citric acid, biological studies 79-10-7, Acrylic acid, biological studies 83-86-3, Phytic acid 87-69-4, Tartaric acid, biological studies 110-15-6, Succinic acid, biological studies 110-16-7, Maleic acid, biological studies 110-17-8, Fumaric acid, biological studies 110-94-1, Glutaric acid 141-82-2, Malonic acid, biological studies 144-62-7, Oxalic acid, biological studies 526-95-4, Gluconic acid 3724-65-0, Crotonic acid **6484-52-2**, **Ammonium nitrate**, biological studies 6915-15-7, Malic acid 7439-89-6D, Iron, salts, biological studies 7447-40-7, Potassium chloride, biological studies 7487-88-9, Magnesium sulfate, biological studies 7631-99-4, Sodium **nitrate**, biological studies 7647-01-0, Hydrochloric acid, biological studies 7647-14-5, Sodium chloride, biological studies 7664-38-2, Phosphoric acid, biological studies 7664-93-9, Sulfuric acid, biological studies 7681-11-0, Potassium iodide, biological studies 7681-82-5, Sodium iodide, biological studies

7697-37-2, Nitric acid, biological studies **7757-79-1**, Potassium **nitrate**, biological studies 7757-82-6, Sodium sulfate, biological studies 7778-80-5, Potassium sulfate, biological studies 7783-20-2, **Ammonium** sulfate, biological studies 7786-30-3, Magnesium chloride, biological studies 10043-52-4, Calcium chloride, biological studies 10102-68-8, Calcium iodide **10124-37-5**, Calcium **nitrate** 10124-49-9, Iron sulfate 10343-62-1, Metaphosphoric acid 10377-58-9, Magnesium iodide 10377-60-3, Magnesium **nitrate** 12027-06-4, **Ammonium** iodide 12040-57-2, Iron chloride 12125-02-9, **Ammonium** chloride, biological studies 14104-77-9, Iron **nitrate** 331463-41-3, W Dash
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(seawater mixed with iodides, inorg. salts, and acids for laver treatment of control of diseases and diatom)

IT 577-11-7
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(**surfactant**; seawater mixed with iodides, inorg. salts, and acids for laver treatment of control of diseases and diatom)

L152 ANSWER 11 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:814247 HCAPLUS
DOCUMENT NUMBER: 133:345903
TITLE: Herbicide formulation adjuvants.
INVENTOR(S): Killick, Robert William; Killick, Andrew Robert; Jones, Peter William; Wrigley, Peter Ronald; Morrison, John David
PATENT ASSIGNEE(S): Victorian Chemicals International Pty., Ltd., Australia
SOURCE: PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000067573	A1	20001116	WO 2000-AU416	20000505 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 733300	B2	20010510	AU 2000-42761	20000505 <--
US 2005164887	A1	20050728	US 2005-88928	20050325 <--
PRIORITY APPLN. INFO.:			AU 1999-175	A 19990505 <--
			WO 2000-AU416	W 20000505
			US 2001-831301	A1 20010508

ED Entered STN: 21 Nov 2000
AB The title adjuvants comprise: (a) ≤75 % by weight lipophilic solvent(s); (b) ≤50 % by weight plant nutrient(s) (e.g. **ammonium** salts of inorg. anions); and (c) ≤50 % mixture of cationic emulsifiers, including **surfactants** which exhibit cationic characteristic in acidic conditions.

IC ICM A01N025-30
ICS A01N025-02; A01N057-20
CC 5-3 (**Agrochemical Bioregulators**)
IT **Quaternary ammonium compounds, uses**
RL: MOA (Modifier or additive use); USES (Uses)
(alkylbenzyldimethyl, chlorides; herbicide formulation adjuvants containing)
IT **Quaternary ammonium compounds, uses**
RL: MOA (Modifier or additive use); USES (Uses)
(alkyltrimethyl, chlorides; herbicide formulation adjuvants containing)
IT **Amines, uses**
RL: MOA (Modifier or additive use); USES (Uses)
(coco alkyl, dimethyl-; herbicide formulation adjuvants containing)
IT 122-19-0, **Dimethylstearylbenzylammonium** chloride
RL: MOA (Modifier or additive use); USES (Uses)
(Algene SC 25; herbicide formulation adjuvants containing)
IT 112-02-7, **Cetyltrimethylammonium** chloride
RL: MOA (Modifier or additive use); USES (Uses)
(Quatramine C 16/29; herbicide formulation adjuvants containing)
IT 112-00-5, **Lauryltrimethylammonium** chloride
RL: MOA (Modifier or additive use); USES (Uses)
(Radiaquat 6465; herbicide formulation adjuvants containing)
IT 57-13-6, Urea, uses 111-62-6, Ethyl oleate 112-90-3, Oleylamine
628-13-7D, Pyridinium chloride, alkyl derivs. 1338-43-8, Span 80
1467-16-9D, Imidazolium chloride, alkyl derivs. **6484-52-2**,
Ammonium nitrate, uses 7783-20-2, **Ammonium**
sulfate, uses 10124-31-9, **Ammonium** phosphate 10279-61-5,
Ammonium potassium phosphate 92879-30-6, ALKADET 15
120528-51-0, LI700 160759-29-5, Hasten 182636-17-5, BS 1000
304904-71-0, Quatramine NC 50 304904-98-1, Terwet 3001
RL: MOA (Modifier or additive use); USES (Uses)
(herbicide formulation adjuvants containing)
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L152 ANSWER 12 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:500422 HCAPLUS
DOCUMENT NUMBER: 133:116181
TITLE: Cyanamide aqueous solutions containing water-soluble polymers
INVENTOR(S): Shirataki, Takumi; Takahashi, Noboru
PATENT ASSIGNEE(S): Shinetsu Kasei K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000204007	A2	20000725	JP 1999-4780	19990112 <--
PRIORITY APPLN. INFO.:			JP 1999-4780	19990112 <--

ED Entered STN: 25 Jul 2000
AB The aqueous solns., useful as fertilizers, agrochem. fungicides, **dormancy breaking** agents, etc., contain water-soluble polymers to increase wettability of soils and plants and fix cyanamide (I) to objects thus prolonging the effect. Metolose 90SH 4000 was dissolved in a stock solution of I (15.9%), prepared from lime nitrogen and adjusted to pH 4.5 with H3PO4 to give a test solution Retention of I and herbicidal

effect of the solution against grass weeds were tested in a cabbage field.
IC ICM A01N047-40
ICS A01N025-02; A01N025-24; C05G003-00; C05G005-00; C05C007-00
CC 5-3 (Agrochemical Bioregulators)
Section cross-reference(s): 19
IT **Surfactants**
(nonionic; cyanamide aqueous solns. containing water-soluble polymers to improve
wettability of objects and adhesion to objects)

L152 ANSWER 13 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1999:42566 HCAPLUS
DOCUMENT NUMBER: 130:85908
TITLE: Hair styling compositions containing organic adhesive polymers and ethoxylated alcohol **surfactants**
INVENTOR(S): Schofield, Stephen Robert
PATENT ASSIGNEE(S): The Procter & Gamble Company, USA
SOURCE: PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9900105	A1	19990107	WO 1998-US13500	19980630 <--
W: AU, BR, CA, CN, JP, KR, MX, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
GB 2326889	A1	19990106	GB 1997-13862	19970630 <--
AU 9884735	A1	19990119	AU 1998-84735	19980630 <--
EP 991400	A1	20000412	EP 1998-935501	19980630 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
BR 9810503	A	20000905	BR 1998-10503	19980630 <--
JP 2001506278	T2	20010515	JP 1999-505855	19980630 <--
MX 200000072	A	20000831	MX 2000-72	20000103 <--
PRIORITY APPLN. INFO.:			GB 1997-13862 A	19970630 <--
			WO 1998-US13500 W	19980630 <--

ED Entered STN: 21 Jan 1999
AB A hair styling composition is provided which is particularly suitable for use in the form of a mousse. The composition comprises up to 10 % by weight of an organic adhesive polymer and up to 5 % by weight of an ethoxylated alc. having an aliphatic chain length of up to 16 carbon atoms and a degree of ethoxylation of from 3 to 20 ethoxy groups per mol, and a solvent such as water. The composition provides a foam which is stable at **rest** but which readily **breaks** down under shear to form a creamy liquid which can easily be worked into the hair. A hair preparation contained Polyquaternium-4 2.0000, Dobanol 91-8 0.2500, propylene glycol 0.5000, DMDM hydantoin 0.2140, fragrances 0.1500, disodium EDTA 0.1000, octyl salicylate 0.0100, Pantyl B 0.1000, keratin amino acids 0.0004, citric acid 0.0010, and water 96.6747%.
IC ICM A61K007-06
ICS A61K007-11
CC 62-3 (Essential Oils and Cosmetics)
ST hair styling adhesive polymer **surfactant**; ethoxylated alc hair styling adhesive polymer
IT Alcohols, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(C9-11, ethoxylated; hair styling compns. containing organic adhesive polymers
and ethoxylated alc. **surfactants**)
IT Hair preparations
(conditioners, styling; hair styling compns. containing organic adhesive polymers and ethoxylated alc. **surfactants**)
IT Alcohols, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(ethoxylated; hair styling compns. containing organic adhesive polymers and ethoxylated alc. **surfactants**)
IT Propellants (sprays and foams)
Solvents
Surfactants
(hair styling compns. containing organic adhesive polymers and ethoxylated alc. **surfactants**)
IT Polymers, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(hair styling compns. containing organic adhesive polymers and ethoxylated alc. **surfactants**)
IT Hair preparations
(mousses; hair styling compns. containing organic adhesive polymers and ethoxylated alc. **surfactants**)
IT 92183-41-0, Polyquaternium-4
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(hair styling compns. containing organic adhesive polymers and ethoxylated alc. **surfactants**)
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L152 ANSWER 14 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1998:330508 HCAPLUS
DOCUMENT NUMBER: 129:64275
TITLE: Effect of **dormancy-breaking** agents with **Armobreak** in the peach
AUTHOR(S): Erez, A.; Yablowitz, Z.
CORPORATE SOURCE: The Volcani Center, A.R.O., Institute of Horticulture, Bet-Dagan, 50250, Israel
SOURCE: Acta Horticulturae (**1997**), 441(Fifth International Symposium on Temperate Zone Fruits in the Tropics and Subtropics, 1996), 183-190
CODEN: AHORA2; ISSN: 0567-7572
PUBLISHER: International Society for Horticultural Science
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 03 Jun 1998
AB The need for safe non toxic chems. for use as **rest-breaking** agents led us to explore the potential of using the **Armobreak**, a fatty amine made by Akzo in The Netherlands, in addition to other **dormancy breaking** agents, on peaches. The use of oil-DNOC on peach, may soon be discontinued due to its toxicity, and Dormex often damages the flowers and hence reduces yields. Based on 3 yr of trials **Armobreak** reduced concentration of other added chems. and enhanced markedly the effect of KNO3. A specific characteristic of this chemical is its ability to advance flowering, especially when used with low concns.
of other chems. This may lead to a better level of fruit set due to reduced competition between the reproductive and the vegetative sinks,

especially at the same node.
CC 5-3 (Agrochemical Bioregulators)
ST peach **dormancy breaking** **Armobreak** potassium **nitrate**
IT Amines, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(diamines, N-tallow alkylalkylenediamines, ethoxylated propoxylated; effect of **dormancy breaking** agents and **Armobreak** in peach)
IT Growth and development, plant
(**dormancy-breaking**; effect of **dormancy breaking** agents and **Armobreak** in peach)
IT Peach (Prunus persica)
(effect of **dormancy breaking** agents and **Armobreak** in peach)
IT Growth and development, plant
(fruit-set; effect of **dormancy breaking** agents and **Armobreak** in peach)
IT **7757-79-1**, Potassium **nitrate**, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(effect of **dormancy breaking** agents and **Armobreak** in peach)
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L152 ANSWER 15 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1998:330504 HCAPLUS
DOCUMENT NUMBER: 129:64273
TITLE: **Dormancy breaking** experiments on apricots
AUTHOR(S): Kuden, A. B.; Son, L.
CORPORATE SOURCE: Department of Horticulture Faculty of Agriculture, University of Cukurova, Adana, 01330, Turk.
SOURCE: Acta Horticulturae (**1997**), 441(Fifth International Symposium on Temperate Zone Fruits in the Tropics and Subtropics, 1996), 153-157
CODEN: AHORA2; ISSN: 0567-7572
PUBLISHER: International Society for Horticultural Science
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 03 Jun 1998
AB KNO3 (4 %) and thiourea (2 %) were applied to Tokaloglu and Karacabey apricot cultivars in 1996. KNO3 (4%)+thiourea (2%) application gave the highest results with 84.52 % of flower bud burst and 81.32 % of fruit set. Dormex application gave the worst results with 49.53 % of flower bud burst and 54.65 % of fruit set. The highest flowering and fruit set were obtained from the KNO3 (4%) + thiourea (2%) application both in Tokaloglu and Karacabey apricots.
CC 5-3 (Agrochemical Bioregulators)
ST apricot **dormancy breaking** potassium **nitrate** thiourea
IT Growth and development, plant
(**dormancy-breaking**; effect of potassium **nitrate** and thiourea on **dormancy breaking** in apricots)
IT Apricot (Prunus armeniaca)
(effect of potassium **nitrate** and thiourea on **dormancy breaking** in apricots)

IT Growth and development, plant
(flowering; effect of potassium **nitrate** and thiourea on **dormancy breaking** and flowering in apricots)
IT Growth and development, plant
(fruit-set; effect of potassium **nitrate** and thiourea on **dormancy breaking** and fruit-set in apricots)
IT 62-56-6, Thiourea, biological studies **7757-79-1**, Potassium **nitrate**, biological studies
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(effect of potassium **nitrate** and thiourea on **dormancy breaking** and flowering in apricots)
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L152 ANSWER 16 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1996:404955 HCAPLUS
DOCUMENT NUMBER: 125:51504
TITLE: **Dormancy-breaking** compositions for fruit trees.
INVENTOR(S): North, Michael Shaun; Butselaar, Robert Jan
PATENT ASSIGNEE(S): Akzo Nobel N.V., Neth.
SOURCE: Braz. Pedido PI, 11 pp.
CODEN: BPXXDX
DOCUMENT TYPE: Patent
LANGUAGE: Portuguese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BR 9406432	A	19960109	BR 1994-6432	19940414 <--
EP 620970	A1	19941026	EP 1993-201138	19930420 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
ZA 9303611	A	19931220	ZA 1993-3611	19930524 <--
WO 9423574	A1	19941027	WO 1994-EP1180	19940414 <--
W: AU, BR, NZ, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9465692	A1	19941108	AU 1994-65692	19940414 <--
AU 678464	B2	19970529		
EP 701399	A1	19960320	EP 1994-913606	19940414 <--
EP 701399	B1	19970122		
R: ES, FR, GR, IT, PT				
ES 2097045	T3	19970316	ES 1994-913606	19940414 <--
IL 109341	A1	19980924	IL 1994-109341	19940418 <--
US 5693591	A	19971202	US 1995-535280	19951227 <--

PRIORITY APPLN. INFO.: EP 1993-201138 A 19930420 <--
EP 1994-913606 A 19940414 <--
WO 1994-EP1180 W 19940414 <--
OTHER SOURCE(S): MARPAT 125:51504
ED Entered STN: 13 Jul 1996
AB The activity of known **dormancy breakers**, such as Dormex, K **nitrate** and DNOC, optionally in combination with winter oil, is enhanced by alkoxylated amines (Markush given), specifically **Armoblen** ACER 89002.
IC ICM A01N033-12
ICS A01N033-08; A01N025-30
CC 5-3 (Agrochemical Bioregulators)
ST **dormancy breaking** fruit tree alkoxylated amine

IT Amines, biological studies
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(alkoxylated, activity enhancement of fruit-tree **dormancy-breaking** agents by alkoxylated amines)
IT Plant hormones and regulators
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(**dormancy-breaking**, activity enhancement of fruit-tree **dormancy-breaking** agents by alkoxylated amines)
IT Petroleum products
(oils, winter oil; activity enhancement of fruit-tree **dormancy-breaking** agents by alkoxylated amines)
IT Amides, biological studies
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(tallow, N,N-bis(hydroxyethyl), ethoxylated propoxylated, activity enhancement of fruit-tree **dormancy-breaking** agents by alkoxylated amines)
IT 420-04-2, Dormex 534-52-1, DNOC **7757-79-1**, Potassium **nitrate**, biological studies
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(activity enhancement of fruit-tree **dormancy-breaking** agents by alkoxylated amines)

L152 ANSWER 17 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1997:214067 HCAPLUS
DOCUMENT NUMBER: 126:208489
TITLE: Effects of **dormancy breaking** chemicals on the release from **dormancy** of some apricot cultivars
AUTHOR(S): Kuden, A. B.; Polat, A.; Kaska, N.
CORPORATE SOURCE: Department of Horticulture, Faculty of Agriculture, University of Cukurova, Adana, 01330, Turk.
SOURCE: Acta Horticulturae (**1995**), 384(Xth International Symposium on Apricot Culture, 1993), 415-417
CODEN: AHORA2; ISSN: 0567-7572
PUBLISHER: International Society for Horticultural Science
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 02 Apr 1997
AB The effects of thiourea and the combination of KNO3+thiourea as **dormancy breaking** chems. on Canino and Precoce de Colomer apricot cultivars were tested. Both treatments were successful. Although the yield was increased on treated trees, the fruit size was smaller than in untreated trees.
CC 5-3 (Agrochemical Bioregulators)
ST **dormancy breaking** apricot cultivar
IT Apricot (Prunus armeniaca)
(**dormancy breaking** in apricot cultivars)
IT Growth and development, plant
(**dormancy-breaking**; **dormancy breaking** in apricot cultivars)
IT 62-56-6, Thiourea, biological studies **117660-45-4**
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(**dormancy breaking** in apricot cultivars)

L152 ANSWER 18 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1995:185805 HCAPLUS
DOCUMENT NUMBER: 122:3446
TITLE: Sethoxydim response to spray carrier chemical

properties and environment
AUTHOR(S): Nalewaja, John D.; Matysiak, Robert; Szelezniak, Edward
CORPORATE SOURCE: Visiting Sci., North Dakota State Univ., Fargo, ND, 58105, USA
SOURCE: Weed Technology (1994), 8(3), 591-7
CODEN: WETEE9; ISSN: 0890-037X
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 12 Nov 1994
AB Expts. were conducted to determine the influence of spray carrier salts, UV light, and temperature on sethoxydim phytotoxicity to oat or yellow foxtail. Spray solution pH and ions present were both important to sethoxydim phytotoxicity to oat. Sodium and calcium salts were antagonistic to sethoxydim phytotoxicity only when the spray carrier pH exceeded 7. **Ammonium** salts and **ammonium** hydroxide were synergistic with sethoxydim, and the synergism was independent of spray solution pH. **Ammonium** sulfate, but not **ammonium** hydroxide, overcame sodium bicarbonate antagonism of sethoxydim. The antagonism of sethoxydim phytotoxicity by sodium bicarbonate was greatest in the presence of UV light and most pronounced when treated plants were exposed to mid-day sunlight. Sodium bicarbonate or low temperature may reduce the speed of sethoxydim absorption allowing for greater UV degradation of unabsorbed sethoxydim on the leaf surface.
CC 5-3 (**Agrochemical Bioregulators**)
IT **Quaternary ammonium compounds, biological studies**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(sethoxydim response to spray carrier salts, UV light, and temperature)
IT 144-55-8, Sodium bicarbonate, biological studies 497-19-8, Sodium carbonate, biological studies 1305-62-0, Calcium hydroxide, biological studies 1310-73-2, Sodium hydroxide, biological studies 1336-21-6, **Ammonium** hydroxide 3012-65-5, **Ammonium** citrate **6484-52-2**, **Ammonium nitrate**, biological studies 7440-23-5D, Sodium, salts 7440-70-2D, Calcium, salts 7558-79-4, Sodium orthophosphate dibasic 7558-80-7, Sodium orthophosphate monobasic 7631-99-4, Sodium **nitrate**, biological studies 7647-14-5, Sodium chloride, biological studies 7681-38-1, Sodium bisulfate 7722-76-1, **Ammonium** orthophosphate monobasic 7757-82-6, Sodium sulfate, biological studies 7758-23-8, Calcium orthophosphate monobasic 7778-18-9, Calcium sulfate 7783-20-2, **Ammonium** sulfate, biological studies 7783-28-0, **Ammonium** orthophosphate dibasic 7803-63-6, **Ammonium** bisulfate 10043-52-4, Calcium chloride, biological studies **10124-37-5**, Calcium **nitrate** 12125-02-9, **Ammonium** chloride, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(sethoxydim response to spray carrier salts, UV light, and temperature)

L152 ANSWER 19 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1996:650628 HCAPLUS
DOCUMENT NUMBER: 126:100637
TITLE: Effect of chemicals on **breaking dormancy** of spine gourd
AUTHOR(S): Panda, J. M.; Mohapatra, U.; Das, G. C.; Sahu, A.
CORPORATE SOURCE: College Agriculture, Orissa University Agriculture and Technology, Bhubaneswar, India
SOURCE: Orissa Journal of Agricultural Research (1994), 7(Suppl.), 97-98

CODEN: OAREEJ; ISSN: 0970-728X
PUBLISHER: Association of Agricultural Scientists
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 04 Nov 1996
AB Of 4 chems. tested, thiourea was the most effective in braking the dormancy of spine gourd (Momordica dioica) tubers.
CC 5-3 (Agrochemical Bioregulators)
ST **dormancy breaking** Momordica tuber
IT Momordica dioica
(**breaking dormancy** of spine gourd tubers)
IT Hormones, plant
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(**dormancy-breaking**; **breaking dormancy** of spine gourd tubers by)
IT 62-56-6, Thiourea, biological studies 77-06-5, Gibberellic acid 525-79-1, Kinetin **7757-79-1**, Potassium **nitrate**, biological studies
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(**breaking dormancy** of spine gourd tubers by)

L152 ANSWER 20 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1993:185835 HCAPLUS
DOCUMENT NUMBER: 118:185835
TITLE: Activity enhancement of aryloxybenzotriazole herbicides with adjuvants
INVENTOR(S): Parham, Martin Reginald
PATENT ASSIGNEE(S): Imperial Chemical Industries PLC, UK
SOURCE: Brit. UK Pat. Appl., 24 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2257044	A1	19930106	GB 1992-12097	19920608 <--

PRIORITY APPLN. INFO.: GB 1991-13987 A 19910628 <--
OTHER SOURCE(S): MARPAT 118:185835
ED Entered STN: 14 May 1993
AB The herbicidal activity of aryloxybenzotriazole herbicides (EP-A-355049 and EP-A-367242) is enhanced by adjuvants, such as silicones (Silwet L77, Q2 5152, X2 5309, Abil ZP2434), oils (Atplus 441F, Atplus 412, Canplus 328), alc. ethoxylates (Atlox 4848, Synperonic A7, Synperonic 91/6), nonylphenol ethoxylates (Agral 90), amine ethoxylates (Synprolam 35X10, Ethoquad C15), etc.
IC ICM A01N025-00
ICS A01N043-647
CC 5-3 (**Agrochemical Bioregulators**)
IT **Surfactants**
(blended, herbicidal activity enhancement by, of aryloxybenzotriazole derivs.)
IT Wetting agents
Hydrocarbon oils
Quaternary ammonium compounds, biological studies
RL: BIOL (Biological study)
(herbicidal activity enhancement by, of aryloxybenzotriazole derivs.)
IT Fertilizers
RL: BIOL (Biological study)

(**ammonium nitrate**-urea, herbicidal activity enhancement by, of aryloxybenzotriazole derivs.)
IT 57-13-6, Urea, biological studies
RL: BIOL (Biological study)
(herbicidal activity enhancement by **ammonium nitrate** and, of aryloxybenzotriazole derivs.)
IT **6484-52-2**, **Ammonium nitrate**, biological studies
RL: BIOL (Biological study)
(herbicidal activity enhancement by urea and, of aryloxybenzotriazole derivs.)

L152 ANSWER 21 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1988:624624 HCAPLUS
DOCUMENT NUMBER: 109:224624
TITLE: Chemical methods on **breaking dormancy** of low chill nectarines: preliminary evaluations in subtropical Queensland
AUTHOR(S): George, A. P.; Nissen, R. J.
CORPORATE SOURCE: Maroochy Hortic. Res. Stn., Queensland Dep. Primary Ind., Nambour, 4560, Australia
SOURCE: Australian Journal of Experimental Agriculture (**1988**), 28(3), 425-9
CODEN: AJEAEL; ISSN: 0816-1089
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 24 Dec 1988
AB Three chems., Alzodef (49% hydrogen cyanamide) at 20 mL/L, thiourea at 10 g/L and KNO3 at 40 g/L, were tested either alone or in combination for their effects on **breaking dormancy** in the low chill nectarine cultivar Sunred in subtropical Queensland. Compared with KNO3 and thiourea, Alzodef proved more effective in **breaking dormancy** and advancing budbreak and fruit maturity. However, Alzodef reduced both fruit set and final yield. Yield losses were greater when application of Alzodef was delayed from 5 wk to 1 wk before natural budbreak.
CC 5-3 (Agrochemical Bioregulators)
ST nectarine **dormancy breaking** chem; Alzodef **dormancy breaking** nectarine; thiourea **dormancy breaking** nectarine; potassium **nitrate dormancy breaking** nectarine
IT Nectarine
(**dormancy breaking** in, chems. for)
IT Plant hormones and regulators
RL: BIOL (Biological study)
(**dormancy-breaking**, for nectarine)
IT Plant growth and development
(**dormancy-breaking**, in nectarines, Alzodef and potassium **nitrate** and thiourea effect on)
IT Plant growth and development
(fruit-ripening, in nectarines, Alzodef and potassium **nitrate** and thiourea effect on)
IT Plant growth and development
(fruit-set, in nectarines, Alzodef and potassium **nitrate** and thiourea effect on)
IT 62-56-6, Thiourea, biological studies 156-62-7, Alzodef **7757-79-1**, Potassium **nitrate**, biological studies **117660-42-1**, Potassium **nitrate**-thiourea-Alzodef mixture 117660-43-2, Thiourea-Alzodef mixture **117660-44-3**, Potassium **nitrate**-Alzodef mixture **117660-45-4**, Potassium

nitrate-thiourea mixture
RL: BIOL (Biological study)
(in **breaking dormancy** of nectarines)

L152 ANSWER 22 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1987:631360 HCAPLUS
DOCUMENT NUMBER: 107:231360
TITLE: Chemical treatments for **breaking rest** in peach in relation to accumulated chilling
AUTHOR(S): Fernandez-Escobar, R.; Martin, R.
CORPORATE SOURCE: Lab. Pomol., Univ. Cordoba, Cordoba, 14080, Spain
SOURCE: Journal of Horticultural Science (**1987**), 62(4), 457-61
CODEN: JHSCA8; ISSN: 0022-1589
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 25 Dec 1987
AB Thiourea promoted both flower and vegetative bud opening at minimal chilling accumulations. The relationship between flower bud development and accumulated chilling hours was linear when thiourea was applied at 0.5%. The control-buds had an exponential response. Applications of higher concns. of thiourea at >450 h of chilling caused a delay in flower bud development. KNO3 was less effective than thiourea in promoting bud development, but a combination of both increased effectiveness at 328 h and 360 h. Control buds began development following 328 h chilling. Cyanamide showed a strong inhibition of flower bud development, but at low concns. promoted vegetative bud opening.
CC 5-3 (Agrochemical Bioregulators)
ST peach bud **dormancy breaking** thiourea; chilling peach bud thiourea
IT **7757-79-1**, Potassium **nitrate**, biological studies
RL: BIOL (Biological study)
(flower and vegetative bud development in peach response to, chilling in relation to)

L152 ANSWER 23 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1984:63399 HCAPLUS
DOCUMENT NUMBER: 100:63399
TITLE: Effect of some growth regulators and nutritional compounds as substitutes for chilling of 'Delicious' apple leaf and flower buds
AUTHOR(S): Shaltout, Assem D.; Unrath, C. R.
CORPORATE SOURCE: Dep. Hortic. Sci., North Carolina State Univ., Raleigh, NC, 27650, USA
SOURCE: Journal of the American Society for Horticultural Science (**1983**), 108(6), 898-901
CODEN: JOSHB5; ISSN: 0003-1062
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 12 May 1984
AB Resting buds of Delicious apple (Malus domestica) were partially satisfied by applications of Promalin [53663-71-1], 6-benzylaminopurine (BA) [1214-39-7], KNO3, and thiourea [62-56-6]. GA4+7 alone had no effect. The combination of thiourea and KNO3 was as effective as Promalin or BA in stimulating flower bud development. KNO3 had a pronounced effect on forcing flower buds, whereas thiourea had more effect on forcing vegetative buds. BA and Promalin affected both flower and vegetative buds. No treatment affected bloom date or growing degree hours required for flower bud expansion when applied after 450, 950, or 1200 h of

chilling. Promalin and BA were both effective at 300 and 500 ppm, whereas thiourea and KNO3 were effective at 2 and 3% weight/volume, resp.
CC 5-3 (Agrochemical Bioregulators)
IT Plant hormones and regulators
RL: BIOL (Biological study)
(apple flower and leaf bud **dormancy breaking** by)
IT 62-56-6, biological studies 1214-39-7 **7757-79-1**, biological studies 53663-71-1
RL: BIOL (Biological study)
(apple flower and leaf bud **dormancy breaking** by)

L152 ANSWER 24 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1984:2091 HCAPLUS
DOCUMENT NUMBER: 100:2091
TITLE: Chemical **dormancy breaking** of red raspberry
AUTHOR(S): Snir, Iona
CORPORATE SOURCE: Inst. Hortic., Agric. Res. Organ., Bet Dagan, Israel
SOURCE: HortScience (**1983**), 18(5), 710-13
CODEN: HJHSAR; ISSN: 0018-5345
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 12 May 1984
AB Several chemical, used to induce budbreak of deciduous fruit trees in areas lacking sufficient chilling units were applied to 3 cultivars of red raspberry. Raspberry (Rubus idaeus) varieties Delmes, Malling Exploit, and Schoenemann were studied. All treatments including oil + o-dinitrocresol [534-52-1] (5%), KNO3 (5%), thiourea [62-56-6] (1%), and cyanamide [420-04-2] (4%) solns. improved budbreak, and increased yield. The most impressive effect was obtained with 4% cyanamide, which increased fruit size, earliness, and yield.
CC 5-3 (Agrochemical Bioregulators)
ST Rubus chem **dormancy breaking**; raspberry **dormancy breaking**
IT Rubus idaeus
(**dormancy** of, chemical **breaking** of)
IT Plant growth and development
(**dormancy, breaking** of, in red raspberry, chemical)
IT 62-56-6, biological studies 420-04-2 534-52-1 **7757-79-1**, biological studies
RL: BIOL (Biological study)
(**dormancy** of red raspberry **breaking** by)

L152 ANSWER 25 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1984:187249 HCAPLUS
DOCUMENT NUMBER: 100:187249
TITLE: Chemical substitutes of chilling requirement in almond Prunus amygdalus
AUTHOR(S): Kahlon, A. S.; Dhatt, Ajit Singh; Gill, R. P. S.
CORPORATE SOURCE: Dep. Hortic., Punjab Agric. Univ., Ludhiana, 141004, India
SOURCE: Indian Journal of Ecology (**1983**), 10(2), 260-3
CODEN: IJECDC; ISSN: 0304-5250
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 08 Jun 1984
AB The effect of sprays of gibberellic acid (GA3) [77-06-5], thiourea [62-56-6] and KNO3 was studied on **breaking** bud **dormancy** in Nikitsii and Pethick's Wonder cultivars of almond, under subtropical

conditions. The leaf-bud burst was advanced by 20 days with 200 ppm GA3 sprays in Nikitsii. Sprays of KNO3 delayed leaf-emergence. The time of full bloom was advanced by 30 and 23 days by 200 ppm GA3 and 2000 ppm thiourea resp., thereby, resulting in significantly higher fruit-set over the control.

CC 5-3 (Agrochemical Bioregulators)

ST Prunus dormancy gibberellin thiourea; potassium **nitrate** almond dormancy

IT Almond
(**dormancy breakage** in, with gibberellic acid and potassium **nitrate** and thiourea)

IT Plant growth and development
(dormancy, in almond cultivars, gibberellic acid and potassium **nitrate** and thiourea effect on)

IT 62-56-6, biological studies 77-06-5 **7757-79-1**, biological studies
RL: BIOL (Biological study)
(**dormancy** in almond cultivars **termination** by)

L152 ANSWER 26 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1984:605953 HCAPLUS
DOCUMENT NUMBER: 101:205953
TITLE: Modified toxicity of paraquat on barley and wheat
AUTHOR(S): Wheeler, A. W.; Lord, K. A.
CORPORATE SOURCE: Rothamsted Exp. Stn., Harpenden/Herts., AL5 2JQ, UK
SOURCE: Tests of Agrochemicals and Cultivars (**1983**), 4, 90-1
CODEN: TACUDC; ISSN: 0951-4309
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Applied alone, paraquat (I) [4685-14-7] damaged only the treated leaf in wheat. Other leaves were affected only when I was used jointly with dimethylaminoethanol [108-01-0], **choline** chloride [**67-48-1**], dimethylamine [124-40-3], sarcosine [107-97-1]. These same compds. applied jointly with I to barley resulted in more extensive damage to untreated, as well as treated, leaves; other amines also increased damage. **Ammonium** salts of some inorg. acids increased damage only slightly but **ammonium** and Na salts of some fatty acids diminished damage to treated leaves caused by I. Although the tests do not exclude the possibility that additives may modify sensitivity of tissues to I it seems likely that greater damage resulted from increased uptake and, in the case of untreated leaves, increased movement of I.

CC 5-3 (**Agrochemical Bioregulators**)
Section cross-reference(s): 4

IT 56-34-8 56-40-6, biological studies 56-81-5, biological studies 62-53-3, biological studies **67-48-1** 72-17-3 74-89-5, biological studies 75-57-0 102-69-2 102-71-6, biological studies 102-82-9 107-43-7 107-97-1 108-01-0 109-73-9, biological studies 121-44-8, biological studies 121-69-7, biological studies 124-40-3, biological studies 127-09-3 137-40-6 138-24-9 141-43-5, biological studies 141-53-7 156-54-7 515-98-0 540-69-2 631-61-8 999-81-5 1118-68-9 **6484-52-2**, biological studies 7558-80-7 7722-76-1 7783-20-2, biological studies 10043-52-4, biological studies 10051-44-2 12125-02-9, biological studies 14287-04-8 17496-08-1 24307-26-4 32582-93-7
RL: BIOL (Biological study)
(paraquat toxicity to barley and wheat response to)

L152 ANSWER 27 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1984:565419 HCAPLUS

DOCUMENT NUMBER: 101:165419
TITLE: Modified toxicity of 2,4-D on leaves of rape
AUTHOR(S): Wheeler, A. W.; Lord, K. A.
CORPORATE SOURCE: Rothamsted Exp. Stn., Harpenden/Herts., AL5 2JQ, UK
SOURCE: Tests of Agrochemicals and Cultivars (1983), 4, 82-3
CODEN: TACUDC; ISSN: 0951-4309
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 10 Nov 1984
AB The main effect of 2,4-D [94-75-7] was to prevent development of young rape leaves; the treated leaf, although showing damage, often survived longest. The toxicity of 2,4-D therefore depended on uptake by the treated leaf, movement to developing leaves, and sensitivity of developing tissues. Additives were tested at 2 doses (1 and 5 μmol per leaf). When tested alone, additives generally had little effect on leaf survival, but **ammonium** hexanoate [32582-93-7] killed rape seedlings. Most of the amines tested increased toxicity of 2,4-D, shown as a decrease in number of leaves surviving. Glycine [56-40-6] and its N-Me derivs. were among the most effective compds. The **ammonium** salts of fatty acids increased the toxicity of 2,4-D, whereas Na salts generally diminished its effect with the exception of Na hexanoate [10051-44-2] which increased toxicity. This could result from the toxicity of hexanoic acid itself.
CC 5-3 (**Agrochemical Bioregulators**)
Section cross-reference(s): 4
IT 56-34-8 56-40-6, biological studies 56-81-5, biological studies 57-13-6, biological studies 62-53-3, biological studies **67-48-1** 72-17-3 74-89-5, biological studies 75-57-0 102-69-2 102-71-6, biological studies 102-82-9 107-43-7 107-97-1 108-01-0 109-73-9, biological studies 121-44-8, biological studies 121-69-7, biological studies 124-40-3, biological studies 127-09-3 137-40-6 138-24-9 141-43-5, biological studies 141-53-7 156-54-7 515-98-0 540-69-2 631-61-8 999-81-5 1118-68-9 **6484-52-2**, biological studies 7558-80-7 7722-76-1 7783-20-2, biological studies 10043-52-4, biological studies 10051-44-2 12125-02-9, biological studies 14287-04-8 17496-08-1 24307-26-4 32582-93-7
RL: BIOL (Biological study)
(dichlorophenoxyacetate phytotoxicity to winter oilseed rape modification by)

L152 ANSWER 28 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1978:471910 HCAPLUS
DOCUMENT NUMBER: 89:71910
TITLE: Response of phony-infected peach trees to gibberellic acid
AUTHOR(S): French, W. J.; Stassi, D. L.
CORPORATE SOURCE: Agric. Res. Cent., Inst. Food Agric. Sci., Monticello, FL, USA
SOURCE: HortScience (1978), 13(2), 158-9
CODEN: HJHSAR; ISSN: 0018-5345
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 12 May 1984
AB Peach trees (Prunus persica dwarfed by phony disease responded to 2 summer applications of 264 ppm gibberellic acid (I) [77-06-5] by **breaking** the disease-induced **rest** period and resuming nearly normal twig growth. No twig growth was produced on untreated trees and no significant growth occurred on phony trees treated with combinations of cytokinins, sodium isoascorbate [6381-77-7], calcium

nitrate, urea [57-13-6], or citric acid [77-92-9].
CC 5-2 (Agrochemicals)
IT 57-13-6, biological studies 77-06-5 77-92-9, biological studies
6381-77-7 **10124-37-5**
RL: BIOL (Biological study)
(peach tree phony-infected response to)

L152 ANSWER 29 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1979:401235 HCAPLUS
DOCUMENT NUMBER: 91:1235
TITLE: Potassium **nitrate** as apple cv. golden delicious (Malus domestica) **dormancy-breaking** agent
AUTHOR(S): Pasqual, Moacir; Petri, Jose Luiz; Fortes, Gerson R. de L.
CORPORATE SOURCE: Estac. Exp., Empresa Brasileira Pesqui. Agropecu., Cacador, 89500, Brazil
SOURCE: Pesquisa Agropecuaria Brasileira (**1978**), 13(1), 45-51
CODEN: PEABBT; ISSN: 0079-1121
DOCUMENT TYPE: Journal
LANGUAGE: Portuguese
ED Entered STN: 12 May 1984
AB In **dormancy-breaking** studies with Golden Delicious apple at 2 locations, combined spray application of DNOC (I) [534-52-1] 0.12 and Trione B (mineral oil) 5% advanced budding and flowering, concentrated flowering into a shorter period of time, and promoted budding of lateral and terminal buds. Spray application of 10% KNO3 favorably affected budding, flowering, fruit set, and production in 1 location , but had no effect on fruit set in the 2nd. location.. I-Trione B treatment increased the number of floral clusters and production in the 3rd yr, although it had an adverse effect on fruit set. The effect of the **dormancy-breaking** agents decreased with cooler temps. (≤7.2°).
CC 5-3 (Agrochemicals)
ST **dormancy breaking** apple; DNOC **dormancy breaking** apple; potassium **nitrate dormancy breaking** apple
IT Apple
(**dormancy breaking** in)
IT Cold, biological effects
(**dormancy-breaking** agents for apple in relation to)
IT 534-52-1 **7757-79-1**, biological studies
RL: BIOL (Biological study)
(**dormancy breaking** by, in apple)

L152 ANSWER 30 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1976:541938 HCAPLUS
DOCUMENT NUMBER: 85:141938
TITLE: Time of thiourea-potassium **nitrate** application on the rest requirement and bud development in 'Loring' peach
AUTHOR(S): Wolak, R. J.; Couvillon, G. A.
CORPORATE SOURCE: Dep. Hortic., Univ. Georgia, Athens, GA, USA
SOURCE: HortScience (**1976**), 11(4), 400-2
CODEN: HJHSAR; ISSN: 0018-5345
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 12 May 1984
AB Loring peach trees (Prunus persica) were treated with a 1% thiourea

[62-56-6] + 2% KNO3 (TUK) mixture during late rest when 589 chill units had accumulated and 1 week following rest completion, when 691 chill units had accumulated. Applications made during late **rest terminated rest** of both flower and lateral vegetative buds before the control and reduced growing degree hr (GHD°) required for bud break. Applications of TUK a week later resulted in a reduction in GDH° for bud break over the control. The late treatment was intermediate between the control and the earlier treatment for bloom date and GDH° accumulation.

CC 19-4 (Fertilizers, Soils, and Plant Nutrition)
ST peach bud thiourea potassium **nitrate**
IT Peach
(fertilizer experiment with, potassium **nitrate** and thiourea application times in)
IT Fertilizer experiment
(with potassium **nitrate** and thiourea, with peach, application time in relation to)
IT 62-56-6, biological studies
RL: BIOL (Biological study)
(fertilizer experiment with potassium **nitrate** and, with peach)
IT **7757-79-1**, biological studies
RL: BIOL (Biological study)
(fertilizer experiment with thiourea and, with peach)

L152 ANSWER 31 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1976:131395 HCAPLUS
DOCUMENT NUMBER: 84:131395
TITLE: **Breaking** bud **dormancy** in tea crabapple [Malus hupehensis (Pamp.) Rehd.] with cytokinins
AUTHOR(S): Broome, Olivia C.; Zimmerman, Richard H.
CORPORATE SOURCE: ARS, Beltsville, MD, USA
SOURCE: Journal of the American Society for Horticultural Science (**1976**), 101(1), 28-30
CODEN: JOSHB5; ISSN: 0003-1062
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 12 May 1984
AB Of 4 cytokinins tested for **breaking** bud **dormancy** in tea crabapple 6-benzylaminopurine [1214-39-7] and 6-(benzylamino)-9-(2-tetrahydropyranyl)-9H-purine [2312-73-4] were effective at 2000 and 5000 ppm in presence of 1% **surfactant** and 5% dimethyl sulfoxide solvent. Eight **surfactants** tested were equally effective in enhancing the activity of the cytokinins; however, none of the **surfactants** induced bud development alone. The cytokinins were not translocated from site of application.
CC 5-3 (Agrochemicals)
IT Apple
(M. hupehensis, bud **dormancy breaking** in, by cytokinins)
IT **Surfactants**
(bud **dormancy breaking** by cytokinins in relation to)
IT Plant hormones and regulators
RL: BIOL (Biological study)
(cytokinins, bud **dormancy breaking** in tea crabapple by)
IT 1214-39-7 2312-73-4 2365-40-4 7724-76-7
RL: BIOL (Biological study)
(bud **dormancy breaking** in tea crabapple by)

IT 9005-64-5
RL: BIOL (Biological study)
(bud **dormancy breaking** in tea crabapple by cytokinins in relation to)

L152 ANSWER 32 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1971:539631 HCAPLUS
DOCUMENT NUMBER: 75:139631
TITLE: Improved methods for **breaking rest** in the peach and other deciduous fruit species
AUTHOR(S): Erez, A.; Lavee, S.; Samish, R. M.
CORPORATE SOURCE: Volcani Inst. Agric. Res., Bet Dagan, Israel
SOURCE: Proceedings of the American Society for Horticultural Science (1971), 96(4), 519-22
CODEN: PASHA6; ISSN: 0099-4065
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 12 May 1984
AB As shown by laboratory (in vitro and in vivo) and field tests, the rest period of peach buds was broken by 4,6-dinitro-0-cresol (DNOC)-enforced mineral oil, thiourea, aqueous DNOC, K **nitrate**, gibberellic acid, and kinetin. Combinations of active compds. found to be most efficient were DNOC-enforced mineral oil and thiourea, DNOC-enforced mineral oil and gibberellic acid, and KNO3 and thiourea. KNO3 and kinetin mainly advanced flower bud opening, whereas thiourea stimulated leaf bud opening.
CC 18 (Plant Growth Regulators)
ST peach **breaking rest** agents; nitro cresol **breaking rest**; gibberellin **breaking rest**; potassium **nitrate breaking rest** ; kinetin **breaking rest**; thiourea **breaking rest**
IT Hydrocarbon oils, biological studies
RL: BIOL (Biological study)
(**dormancy breaking** by dinitrocresol and, in peaches)
IT Peaches
(**dormancy breaking** in buds of)
IT 534-52-1
RL: BIOL (Biological study)
(**dormancy breaking** by mineral oil and, in peaches)
IT 62-56-6, biological studies 77-06-5, biological studies 525-79-1 **7757-79-1**, biological studies
RL: BIOL (Biological study)
(**dormancy breaking** by, in peaches)

L152 ANSWER 33 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1972:548461 HCAPLUS
DOCUMENT NUMBER: 77:148461
TITLE: Rice peroxidase. II. Effects of chemical treatment on dormancy and the peroxidase activity in rice seeds
AUTHOR(S): Flavier, M. E.; Libunao, W. T.; Strength, D. R.; Santos, A. C.
CORPORATE SOURCE: Coll. Agric., Univ. Philippines, College, Philippines
SOURCE: Philippine Agriculturist (1971), 54(9-10), 414-21
CODEN: PHAGAU; ISSN: 0031-7454
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 12 May 1984
AB Out of various treatments tested, the most effective in **breaking**

rice seed **dormancy** was 10-2M K cyanide [151-50-8]. K **nitrate** [7757-79-1] was effective at 10-2 and 10-3M, but was inhibitory at 10-1M. The peroxidase [9003-99-0] level was lower than in the control in ungerminated dormant seeds, and higher than in the control in germinated ones.

CC 5-3 (Agrochemicals)
Section cross-reference(s): 7

ST seed germination cyanide **nitrate**; peroxidase seed germination

IT Rice
(seeds, peroxidases of, after **dormancy breaking** by potassium cyanide and potassium **nitrate**)

IT 9003-99-0
RL: BIOL (Biological study)
(of rice seeds, potassium cyanide and potassium **nitrate** effect on, in **dormancy breaking**)

IT 151-50-8 **7757-79-1**, biological studies
RL: BIOL (Biological study)
(rice seed **dormancy breaking** by, peroxidases in relation to)

L152 ANSWER 34 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1964:435896 HCAPLUS
DOCUMENT NUMBER: 61:35896
ORIGINAL REFERENCE NO.: 61:6291c-e
TITLE: Effects of some organic growth substances and organic nutrients on dormancy in rice seed.
AUTHOR(S): Roberts, E. H.
CORPORATE SOURCE: W. Africa Rice Res. Inst., Rokupr, Sierra Leone
SOURCE: Physiologia Plantarum (1963), 16(4), 745-55
CODEN: PHPLAI; ISSN: 0031-9317
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 22 Apr 2001
AB cf. preceeding abstract Gibberellic acid (1) and to a less extent kinetin (II) stimulated the germination of a proportion of the seeds in a dormant population, while indoleacetic acid (III) and thiourea sometimes showed slight stimulation. No interactions were shown by I, II, and III in all combinations. No effect was shown by 1-naphthaleneacetic, 1-naphthoxylacetic, 2-naphthoxyacetic, -(1-naphthylmethylthio)propionic, and 2,3,5-triiodobenzoie acids, sucrose, and glucose. Salts Of citrate, succinate, fumarate, and tartrate slightly delayed **breaking** of **dormancy**, as did coumarin. C24, L-α-alanine, β-alanine, thiamine-HCl, pyridoxine-HCl, and nicotinic acid were without effect.

CC 71 (Plant-Growth Regulators)

IT **Ammonium salts**
Plant regulators
(rice dormancy and)

L152 ANSWER 35 OF 89 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1964:435895 HCAPLUS
DOCUMENT NUMBER: 61:35895
ORIGINAL REFERENCE NO.: 61:6291b-c
TITLE: Effects of inorganic ions on dormancy in rice seed.
AUTHOR(S): Roberts, E. H.
CORPORATE SOURCE: W. African Rice Res. Inst., Rokupr, Sierra Leone
SOURCE: Physiologia Plantarum (1963), 16(4), 732-44
CODEN: PHPLAI; ISSN: 0031-9317
DOCUMENT TYPE: Journal
LANGUAGE: English

ED Entered STN: 22 Apr 2001
AB cf. CA 57, 11562g; following abstract Germination was stimulated by **nitrate**, nitrite, hydroxylamine and sometimes by **ammonium** ,but not by urea or a number of amino acids. Values of pH of 2.0 or below stimulated germination; pH 12.0 and above retarded it, and in between there was no effect. Cu++, Hg++, Ag+, and to a lesser extent MoO4-z- retarded the **breaking** of **dormancy** at concns, which did not affect the germination of populations which had completely broken dormancy. Na+, K+, Mn++, Mg++, Fe++, Fe3+, Co++, Ni++, and Zn had no effect at concns, up to 10-2M.
CC 71 (Plant-Growth Regulators)
IT **Ammonium salts**
Nitrates
Plant regulators
(rice dormancy and)

=> d l152 ibib ed ab hitind 36-74
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, MEDLINE, EMBASE, BIOSIS, AGRICOLA, CABA, PASCAL, JICST-EPLUS, FSTA, CROPB, SCISEARCH, WPIX' - CONTINUE? (Y)/N:y

L152 ANSWER 36 OF 89 MEDLINE on STN
ACCESSION NUMBER: 1998278777 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9611170
TITLE: Isolation of the GA-response mutant sly1 as a suppressor of ABI1-1 in Arabidopsis thaliana.
AUTHOR: Steber C M; Cooney S E; McCourt P
CORPORATE SOURCE: Department of Botany, University of Toronto, Toronto, Ontario M5S 3B2, Canada.
SOURCE: Genetics, (1998 Jun) 149 (2) 509-21.
Journal code: 0374636. ISSN: 0016-6731.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199809
ENTRY DATE: Entered STN: 19980917
Last Updated on STN: 19980917
Entered Medline: 19980910
ED Entered STN: 19980917
Last Updated on STN: 19980917
Entered Medline: 19980910
AB **Seed** dormancy and germination in higher **plants** are partially controlled by the **plant** hormones abscisic acid (ABA) and gibberellic acid (GA). ABA establishes **dormancy** during embryo maturation, whereas GA **breaks dormancy** and induces germination. Previous attempts to identify GA response genes were confounded because GA mutants are not expected to germinate and, unlike GA auxotrophs, should fail to be rescued by exogenous GA. Here, we describe a screen for suppressors of the ABA-insensitive mutant ABI1-1 that enriches for GA auxotrophs and GA-insensitive mutants. The vast majority (76%) of the suppressors of ABI1-1 strongly resemble GA auxotrophs in that they are severely dwarfed and have dark green foliage and flowers with underdeveloped petals and stamen. Three isolates were alleles of the GA auxotroph ga1. The remaining severe dwarves were not rescued by GA and belong to a single complementation group that we designate sly1 (Sleepy 1). The alleles of sly1 identified are the first recessive GA-insensitive mutations to reflect the full spectrum of GA-associated phenotypes,

including the failure to germinate in the absence of the ABI1-1 lesion. Thus, we postulate that SLY1 is a key factor in GA reception.

CT Abscisic Acid: GE, genetics
Abscisic Acid: PH, physiology
Alleles
***Arabidopsis: EN, enzymology**
*Arabidopsis: GE, genetics
Arabidopsis: GD, growth & development
*Arabidopsis Proteins
Drug Resistance: GE, genetics
Enzyme Repression: DE, drug effects
Enzyme Repression: GE, genetics
Gene Expression Regulation, Enzymologic: DE, drug effects
Gene Expression Regulation, Plant: DE, drug effects
Germination: GE, genetics
Gibberellins: BI, biosynthesis
*Gibberellins: PD, pharmacology
Phenotype
*Phosphoprotein Phosphatase: BI, biosynthesis
*Phosphoprotein Phosphatase: GE, genetics
Research Support, Non-U.S. Gov't
Research Support, U.S. Gov't, Non-P.H.S.
*Suppression, Genetic
Suppression, Genetic: DE, drug effects

RN 21293-29-8 (Abscisic Acid); 77-06-5 (gibberellic acid)
CN 0 (Arabidopsis Proteins); 0 (Gibberellins); EC 3.1.3.- (ABI1 protein, Arabidopsis); EC 3.1.3.16 (Phosphoprotein Phosphatase)

L152 ANSWER 37 OF 89 MEDLINE on STN
ACCESSION NUMBER: 95152559 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7849758
TITLE: Promoter tagging with a promoterless ipt gene leads to cytokinin-induced phenotypic variability in transgenic tobacco **plants**:implications of gene dosage effects.
AUTHOR: Hewelt A; Prinsen E; Schell J; Van Onckelen H; Schmulling T
CORPORATE SOURCE: Universitat Tubingen, Lehrstuhl fur Allgemeine Genetik, Germany.
SOURCE: Plant journal : for cell and molecular biology, **(1994 Dec)** 6 (6) 879-91.
Journal code: 9207397. ISSN: 0960-7412.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199503
ENTRY DATE: Entered STN: 19950322
Last Updated on STN: 19950322
Entered Medline: 19950314

ED Entered STN: 19950322
Last Updated on STN: 19950322
Entered Medline: 19950314

AB Tobacco **plants** have been transformed with a T-DNA construct harboring a promoterless cytokinin-synthesizing ipt gene close to the right T-DNA border. Eighteen out of 85 transgenic clones displayed phenotypic alternations typical for an enhanced cytokinin production. Northern blot analysis confirmed the transcriptional activation of the introduced gene by tagged **plant** promoters. The concentration of cytokinins, expressed as zeatinriboside equivalents, was increased up to sevenfold in transgenic tissues. These increases in cytokinin levels

resulted in major developmental changes. Transgenic clones exhibited to different levels traits of a general cytokinin-syndrome, i.e. reduced **root** growth, reduced apical dominance, reduced **leaf** surface, reduced growth of the stem and retarded **leaf** senescence or displayed localized and developmentally specific cytokinin-induced alterations in otherwise normally developing **plants**. These traits were in particular a simultaneous **break** of **dormancy** in all axillary buds before or at the onset of flowering or the reorientation of the developmental pathway of secondary meristems or terminally differentiated cells. This indicates that endogenously produced cytokinins not only influence different growth parameters but have the potential to alter differentiation pattern. The results show that stably inherited developmental alterations due to a general or localized cytokinin overproduction **can** be obtained by the promoter-tagging approach. The investigation of gene dosage effects in homozygote **plants** readdresses the question of threshold levels for cytokinin effects on the developmental program of **plants**.

CT Adenosine: AA, analogs & derivatives
Adenosine: BI, biosynthesis
Base Sequence
*Cytokinins: BI, biosynthesis
DNA, Bacterial
DNA, Plant: AN, analysis
Escherichia coli
***Genes, Plant**
Isopentenyladenosine: AA, analogs & derivatives
Isopentenyladenosine: BI, biosynthesis
Molecular Sequence Data
Phenotype
Plant Growth Regulators: BI, biosynthesis
Plant Roots
Plants, Genetically Modified
***Plants, Toxic**
Plasmids
Promoter Regions (Genetics)
Research Support, Non-U.S. Gov't
Rhizobium radiobacter: GE, genetics
Tobacco: GE, genetics
Tobacco: GD, growth & development
*Tobacco: ME, metabolism
Variation (Genetics)

RN 28542-78-1 (zeatin riboside); 58-61-7 (Adenosine); 7724-76-7 (Isopentenyladenosine)

CN 0 (Cytokinins); 0 (DNA, Bacterial); 0 (DNA, **Plant**); 0 (**Plant** Growth Regulators); 0 (Plasmids); 0 (T-DNA)

GEN ipt

L152 ANSWER 38 OF 89 MEDLINE on STN
ACCESSION NUMBER: 75120467 MEDLINE
DOCUMENT NUMBER: PubMed ID: 235126
TITLE: **Breaking** of **seed dormancy** by catalase inhibition.
AUTHOR: Hendricks S B; Taylorson R B
SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (1975 Jan) 72 (1) 306-9.
Journal code: 7505876. ISSN: 0027-8424.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English

FILE SEGMENT: Priority Journals
ENTRY MONTH: 197506
ENTRY DATE: Entered STN: 19900310
Last Updated on STN: 19950206
Entered Medline: 19750611
ED Entered STN: 19900310
Last Updated on STN: 19950206
Entered Medline: 19750611
AB Germination of some dormant **seeds** is promoted by solutions of thiourea, sodium nitrite, and hydroxylamine salts. The promotions are accompanied by irreversible inhibition of catalase (EC 1.11.1.6) in extracts from the **seeds.** The **seeds** are also promoted in germination by catechol and pyrogallol solutions. These effects are recorded for lettuce (Lactuca sativa L. cv. Grand Rapids) and pigweed (Amaranthus albus L.) **seeds.** The results indicae that metabolically derived hydrogen peroxide, spared from decomposition by catalase inhibition, oxidizes reduced NADPH required as the oxidant in the pentose pathway of glucose use. The metabolic system for such use of H2O2 involves the enzymes, peroxidase (EC 1.11.1.7) and pyridine nucleotide quinone oxidoreductase (EC 1.6.99.2), which are present in the dormant **seed** prior to imbibition of water.
CT *Catalase: AI, antagonists & inhibitors
Catechols: PD, pharmacology
Dose-Response Relationship, Drug
Enzyme Inhibitors: PD, pharmacology
Hydroxylamines: PD, pharmacology
NAD: ME, metabolism
NADH, NADPH Oxidoreductases: ME, metabolism
Nitrites: PD, pharmacology
Oxidation-Reduction
Peroxidases: ME, metabolism
Plant Extracts: PD, pharmacology
Plants: EN, enzymology
Pyrogallol: PD, pharmacology
***Seeds: GD, growth & development**
Thiourea: PD, pharmacology
RN 53-84-9 (NAD); 62-56-6 (Thiourea); 87-66-1 (Pyrogallol)
CN 0 (Catechols); 0 (Enzyme Inhibitors); 0 (Hydroxylamines); 0 (Nitrites); 0 (**Plant** Extracts); EC 1.11.1. (Peroxidases); EC 1.11.1.6 (Catalase); EC 1.6. (NADH, NADPH Oxidoreductases)

L152 ANSWER 39 OF 89 MEDLINE on STN
ACCESSION NUMBER: 75069977 MEDLINE
DOCUMENT NUMBER: PubMed ID: 4440352
TITLE: Polyribosome formation and RNA synthesis after **breaking** the **dormancy** of sugar beet **root.**
AUTHOR: Wasilewska L D; Cherry J H
SOURCE: Acta biochimica Polonica, (1974) 21 (3) 339-54.
Journal code: 14520300R. ISSN: 0001-527X.
PUB. COUNTRY: Poland
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197502
ENTRY DATE: Entered STN: 19900310
Last Updated on STN: 19900310
Entered Medline: 19750220
ED Entered STN: 19900310
Last Updated on STN: 19900310

Entered Medline: 19750220
CT **Plants, Edible: GD, growth & development**
***Plants, Edible: ME, metabolism**
Plants, Edible: UL, ultrastructure
*Polyribosomes
Polyribosomes: EN, enzymology
*RNA: BI, biosynthesis
RNA: ME, metabolism
RNA, Messenger: BI, biosynthesis
RNA, Ribosomal: BI, biosynthesis
Ribonucleases: ME, metabolism
Time Factors
Vegetables
RN 63231-63-0 (RNA)
CN 0 (RNA, Messenger); 0 (RNA, Ribosomal); EC 3.1.- (Ribonucleases)

L152 ANSWER 40 OF 89 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 95050650 EMBASE
DOCUMENT NUMBER: 1995050650
TITLE: **Seed** germination of medicinal **plants.**
II. Germination of aconite **seeds.**
AUTHOR: Katsuki S.; Kojima H.; Kawaguchi K.; Furuya T.
CORPORATE SOURCE: Tanegashima Experimental Station, National Inst. of Health Sciences, Noma, Nakatane-cho,Kagoshima 891-36, Japan
SOURCE: Natural Medicines, (1994) Vol. 48, No. 4, pp. 233-236.
ISSN: 1340-3443 CODEN: NMEDEO
COUNTRY: Japan
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
037 Drug Literature Index
LANGUAGE: Japanese
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 950308
Last Updated on STN: 950308
ED Entered STN: 950308
Last Updated on STN: 950308
AB The effects of gibberellin, kinetin, thiourea and **potassium nitrate** on the germination of Aconitum japonicum **seeds** were studied. Both autumn and spring sowings, gave high germination rates when the **seeds** had been treated with gibberellin A3. A treatment with 50 ppm gibberellin was effective, and treatment with 500 ppm gibberellin was more effective for germination. The effects of presoaking of the **seeds** in a 500 ppm gibberellin solution for 3 h and 24 h were about the same. Kinetin, thiourea and **potassium nitrate** did not have such an effect of **breaking dormancy** of the **seeds.** The optimum temperature for germination was 10°C. At higher temperatures, the germination rate tended to be reduced, but the average days required for germination were shortened. Low temperature (5°C) treatments for 2 weeks, one month, 2 months and 3 months, and stratification for about 3 months were not so effective as gibberellin treatment. In the pot test started on 17, December the **seeds** pre-soaked with 500 ppm gibberellin for 24 h, gave 50% germination rate in the spring of the 1st year, while the germination rate of non-treated **seeds** of the 1st year was 10% and then that of the 2nd year was 4%. Treatment with 500 ppm gibberellin A3 at 10°C was effective in **breaking dormancy** of the **seeds** of other three Aconitum spp., A. japonicum var. montanum, A. sanyoense and A. carmichaeli.
CT Medical Descriptors:

*germination
***plant seed**
article
seasonal variation
temperature
Drug Descriptors:
aconite
*gibberellic acid
*kinetin
***potassium nitrate**
*thiourea
RN (aconite) 8063-12-5; (gibberellic acid) 77-06-5; (kinetin) 525-79-1; (**potassium nitrate**) **7757-79-1**; (thiourea) 62-56-6

L152 ANSWER 41 OF 89 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 83129849 EMBASE
DOCUMENT NUMBER: 1983129849
TITLE: [Evidence of favorable influence of ethanol in aqueous solution on the **breaking** of barley **seed dormancy**].
MISE **EN** EVIDENCE DE L'INFLUENCE BENEFIQUE DE L'ALCOOL ETHYLIQUE **EN** SOLUTION AQUEUSE SUR LA LEVEE DE DORMANCE DES ORGES.
AUTHOR: Le Deunff Y.
CORPORATE SOURCE: Lab. Physiol. Veg., Inst. Natl. Agron. Paris-Grignon, 75231 Paris Cedex 05, France
SOURCE: Comptes Rendus des Seances de l'Academie des Sciences - Series III, (1983) Vol. 296, No. 8, pp. 433-436.
CODEN: CHDDAT
COUNTRY: France
DOCUMENT TYPE: Journal
LANGUAGE: French
SUMMARY LANGUAGE: English

L152 ANSWER 42 OF 89 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 77153606 EMBASE
DOCUMENT NUMBER: 1977153606
TITLE: Biochemical genetics of Neurospora crassa conidial germination.
AUTHOR: Schmit J.C.; Brody S.
CORPORATE SOURCE: Dept. Biol., Univ. California, San Diego, La Jolla, Calif. 92093, United States
SOURCE: Bacteriological Reviews, (1976) Vol. 40, No. 1, pp. 1-41.
CODEN: BAREA8
DOCUMENT TYPE: Journal
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
AB A compilation of data has been presented comparing the conidia of Neurospora with the vegetative mycelia. These two phases of the asexual life cycle were compared with respect to their content of DNA, RNA, protein, lipid, 20 different low molecular weight compounds, and cell wall composition. The specific activities of 21 enzymes from both phases are compared. In general, conidia have more similarities than differences to vegetative mycelia. Some of the important differences found between them so far are as follows: conidia have few polysomes, little oxidative phosphorylation, no cell wall galactosamine, and low cellular pool levels of arginine and ornithine. They contain higher amounts of glutamic acid,

oxidized glutathione, phospholipid, and a hydrophobic surface layer. The biochemical changes that occur during conidial germination are summarized. The known biochemical events **can** be grouped into three classes. The first group of events occurs in the first 10 to 20 min, and only requires hydration of the conidia. Some of these early events **can** be grouped into a temporal sequence, similar to a multistep trigger reaction, and a model for the **breaking** of **dormancy** is proposed based on these events. The second group of events occurs after a few hours, and requires a carbon source. This group of events, such as mitochondrial changes and transport changes, appear to be related in some way to changes in the structure of the membranes. A third group of events occurs considerably later in germination and involves the activation of the synthesis of two cell wall polymers. The prominent events that occur very early in germination are the degradation of a large endogenous glutamic acid pool, a surge in the level of NADH and NADPH, the enzymatic reduction of the high content of oxidized glutathione, and the formation of polysomes. The first three of these events are, in some sense, unusual biochemical events. First, they appear to be unique to germination and were not detected at any other time. Second, they all start and finish during the initial phases of germination, as opposed to many events, such as RNA synthesis which may start in the first few minutes, but then continue throughout vegetative growth. A four point model for dormancy and conidial germination is proposed which is based primarily on these three early events. One prediction of this model is that cellular proteins in the conidia have a high content of disulfide bonds. An elaboration of this idea is put forth with respect to how internal cross linking of this type could stabilize and inactivate enzymes in a readily reversible manner. Other aspects of the model are discussed with reference to parallels found in the germination of bacterial spores and **plant seeds.** There is also a discussion of the previous and potential uses of genetic approaches to studies on a particular phase of development, such as germination.

CT Medical Descriptors:
*genetics
*neurospora crassa
*spore germination
microorganism
review

L152 ANSWER 43 OF 89 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 1999:407440 BIOSIS
DOCUMENT NUMBER: PREV199900407440
TITLE: Overcoming **dormancy**, advancing **budbreak** , and advancing **fruit** maturity in 'Bing' sweet cherry (Prunus avium L.): **Surfactants/ dormant** oils + **calcium ammonium nitrate** or hydrogen cyanamide.
AUTHOR(S): Weis, K. G. [Reprint author]; Southwick, S. M. [Reprint author]; Yeager, J. T. [Reprint author]; Rupert, M. E. [Reprint author]; Moran, R. E. [Reprint author]; Grant, J. A.; Coates, W. W.
CORPORATE SOURCE: Pomology Dept., Univ. of California, Davis, CA, 95616, USA
SOURCE: Hortscience, (June, 1999) Vol. 34, No. 3, pp. 525. print. Meeting Info.: 96th Annual International conference of the American Society for Horticultural Science. Minneapolis, Minnesota, USA. July 27-31, 1999. American Society for Horticultural Science.
CODEN: HJHSAR. ISSN: 0018-5345.
DOCUMENT TYPE: Conference; (Meeting)

Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 8 Oct 1999
Last Updated on STN: 8 Oct 1999
ED Entered STN: 8 Oct 1999
Last Updated on STN: 8 Oct 1999
CC Horticulture - Small fruits 53006
Plant physiology - Growth, differentiation 51510
Plant physiology - Reproduction 51512
General biology - Symposia, transactions and proceedings 00520
IT Major Concepts
Agrichemicals; Horticulture (Agriculture)
IT Chemicals & Biochemicals
calcium ammonium nitrate; **dormant** oils; hydrogen cyanamide; **surfactants**; **Armobreak**; CAN17; Dormex
IT Miscellaneous Descriptors
budbreak advancement; **dormancy break**; **fruit** maturity advancement; Meeting Abstract
ORGN Classifier
Rosaceae 26675
Super Taxa
Dicotyledones; Angiospermae; Spermatophyta; **Plantae**
Organism Name
Prunus avium [sweet cherry]: cultivar-Bing, small **fruit** crop
Taxa Notes
Angiosperms, Dicots, **Plants**, Spermatophytes, Vascular **Plants**
RN **15245-12-2** (**calcium ammonium nitrate**)
420-04-2 (hydrogen cyanamide)
156-62-7 (Dormex)

L152 ANSWER 44 OF 89 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 1998:405018 BIOSIS
DOCUMENT NUMBER: PREV199800405018
TITLE: Effect of several **dormancy breaking** agents on **budburst** and maturity in forcing culture of **grapes.**
AUTHOR(S): Kim, Seon-Kyu [Reprint author]; Kim, Seung-Heui; Son, Chang-Wha
CORPORATE SOURCE: Dep. Horticulture, Chungbuk Natl. Univ., Cheongju 361-763, South Korea
SOURCE: Journal of the Korean Society for Horticultural Science, (June, 1998) Vol. 39, No. 3, pp. 307-311. print. ISSN: 0253-6498.
DOCUMENT TYPE: Article
LANGUAGE: Korean
ENTRY DATE: Entered STN: 21 Sep 1998
Last Updated on STN: 21 Sep 1998
ED Entered STN: 21 Sep 1998
Last Updated on STN: 21 Sep 1998
AB Effects of Merit Blue, Phtin Green, calcium cyanamide, garlic juice, and commercially processed garlic formula (Ekinin Gold), lime nitrogen, and **ammonium nitrate** on **dormancy breaking** in Delaware and Daebong **grapes** were studied. Merit Blue was the most effective for **breaking dormancy**, hastening the **budburst** date by 1-2 weeks in Delaware and by 5-6 days in Daebong respectively. Garlic juice did not affect the **budburst** date but

resulted in even **budbreak**. Single application of chemicals delayed the **flowering**, while double application hastened in Delaware. Harvest date, especially the beginning of the harvest in Delaware was hastened by Merit Blue, Phtin Green, and cyanamide, while double application of **ammonium nitrate** was the most effective for hastening harvest date in Daebong. The **dormancy breaking** agents tended to hasten the harvest date and to prolong the harvesting period.

CC Horticulture - Small fruits 53006
Plant physiology - Growth, differentiation 51510

IT Major Concepts
Horticulture (Agriculture)

IT Chemicals & Biochemicals
ammonium nitrate: **budburst**, **dormancy breaking** agent, maturation; calcium cyanamide: **budburst**, maturation, **dormancy breaking** agent

ORGN Classifier
Vitaceae 26940
Super Taxa
Dicotyledones; Angiospermae; Spermatophyta; **Plantae**
Organism Name
grape: cultivar-Daebong, cultivar-Delaware
Taxa Notes
Angiosperms, Dicots, **Plants**, Spermatophytes, Vascular **Plants**

RN **6484-52-2 (ammonium nitrate)**
156-62-7 (calcium cyanamide)

L152 ANSWER 45 OF 89 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 1993:136394 BIOSIS
DOCUMENT NUMBER: PREV199395069194
TITLE: Effects of different nitrogen compounds and temperatures on the germination of Avena sterilis ssp. macrocarpa Mo.
AUTHOR(S): Gonzalez Ponce, R.; Salas, M. L.
CORPORATE SOURCE: Inst. Edafol. Biol. Vegetal, Consejo Superior Investigaciones Cientificas, C/Serrano, 115 dpdo. 28006 Madrid, Espana, spain
SOURCE: Biologia Plantarum (Prague), (1989) Vol. 31, No. 4, pp. 261-268.
CODEN: BPABAJ. ISSN: 0006-3134.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 16 Mar 1993
Last Updated on STN: 17 Mar 1993

ED Entered STN: 16 Mar 1993
Last Updated on STN: 17 Mar 1993

AB The effect of several nitrogen compounds on the germination of the first **seed** of each spikelet of Avena sterilis spp. macrocarpa Mo. was studied on Petri dishes placed in germination chamber. The compounds assayed were **ammonium** sulphate, **ammonium nitrate**, urea and **calcium nitrate**, generally used as fertilizer for cereal crops, as well as a control supplied with water only. The concentration o the assayed compounds were 100, 1000, 2500 and 5000 ppm either at a constant temperature of 15 degree C or at alternated temperatures 5 degree C and 15 degree C, for 16 and 8 h, respectively. Significant increase in the germination percentages occurred when **nitrate** compounds were used in relation to other compounds and no significant differences were found between the urea, and

ammonium sulphate. This increase became significant at 1000 ppm. and therefrom until 5000 ppm germination stabilized. In the case of urea, very high abnormal germination percentages were obtained at 2500 ppm, while the effect turned noxious from 5000 ppm. The use of alternating temperatures significantly increased the germination capacity of the wild oat **seeds** in the case of urea, **ammonium** sulphate and **ammonium nitrate.** It is found that **nitrates** are capable of **breaking** the **dormancy** of Avena sterilis ssp. macrocarpa Mo. **seeds**, which according to various authors, is due to an increase of the respiratory activity of the **seeds.**

CC Biochemistry studies - Minerals 10069
External effects - Temperature as a primary variable 10614
Nutrition - Minerals 13206
Plant physiology - Temperature 51503
Plant physiology - Nutrition 51504
Agronomy - Weed control 52518
Soil science - Fertility and applied studies 52807
Pest control: general, pesticides and herbicides 54600

IT Major Concepts
Nutrition; Pest Assessment Control and Management; Physiology; Soil Science

IT Chemicals & Biochemicals
NITROGEN

IT Miscellaneous Descriptors
DORMANCY BREAKAGE; FERTILIZER; NUTRITION

ORGN Classifier
Gramineae 25305
Super Taxa
Monocotyledones; Angiospermae; Spermatophyta; **Plantae**
Organism Name
Avena sterilis ssp. macrocarpa
Taxa Notes
Angiosperms, Monocots, **Plants**, Spermatophytes, Vascular **Plants**

ORGN Classifier
Tracheophyta 22000
Super Taxa
Plantae
Organism Name
weed
Taxa Notes
Plants, Vascular **Plants**

RN 7727-37-9D (NITROGEN)

L152 ANSWER 46 OF 89 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 1989:422624 BIOSIS
DOCUMENT NUMBER: PREV198988080882; BA88:80882
TITLE: THE EFFECT OF NITROGEN FERTILIZERS ON THE GERMINATION AND **SEEDLING** EMERGENCE OF WILD OAT AVENA-FATUA L. **SEED** IN DIFFERENT SOIL TYPES.
AUTHOR(S): AGENBAG G A [Reprint author]; DE VILLIERS O T
CORPORATE SOURCE: DEP AGRONOMY PASTURES, UNIV STELLENBOSCH, STELLENBOSCH 7600, SOUTH AFRICA
SOURCE: Weed Research, (1989) Vol. 29, No. 4, pp. 239-246. CODEN: WEREAT. ISSN: 0043-1737.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 19 Sep 1989

Last Updated on STN: 23 Sep 1989
ED Entered STN: 19 Sep 1989
Last Updated on STN: 23 Sep 1989
AB **Ammonium**-containing fertilizers such as granular limestone **ammonium nitrate** (**LAN**) and liquid **ammonium nitrate** (AN) proved to be most effective in stimulating germination and emergence of wild oat in sandy and loamy soil. In pot experiments, rates as low as 25 k N ha-1, significantly increased **seedling** emergence of wild oat. In sandy soil percentage emergence increased with increasing levels of **LAN**-fertilizer up to 125 kg N ha-1 which gave 76.1% emergence after 60 days. In control pots where no nitrogen was applied, only 21.6% of **seeds planted** emerged after 60 days. In loamy soil, as for AN in both soil types, high levels of **LAN** initially delayed **seedling** emergence. This negative effect disappeared approximately 15 days after **seeding**, resulting in no significant difference in emergence of wild oat where 25 to 125 kg N ha-1 was applied as **LAN** or AN. All these rates, however, increased **seedling** emergence between 25 and 35% compared to the no-nitrogen treatments. Since the same rate of **ammonia** gas is not equally effective in **breaking dormancy** of semi- and deeply **dormant** wild oat **seed**, results of these experiments are not necessarily applicable to wild oat **seeds** differing in dormancy status.
CC Biochemistry studies - Minerals 10069
Nutrition - Minerals 13206
Plant physiology - Nutrition 51504
Plant physiology - Growth, differentiation 51510
Plant physiology - Reproduction 51512
Agronomy - Weed control 52518
Soil science - Fertility and applied studies 52807
IT Major Concepts
Development; Nutrition; Pest Assessment Control and Management; Reproduction; Soil Science
IT Miscellaneous Descriptors
AMMONIUM NITRATE DORMANCY WEED
AGRICULTURE
ORGN Classifier
Gramineae 25305
Super Taxa
Monocotyledones; Angiospermae; Spermatophyta; **Plantae**
Taxa Notes
Angiosperms, Monocots, **Plants**, Spermatophytes, Vascular **Plants**
RN 7727-37-9 (NITROGEN)
6484-52-2 (AMMONIUM NITRATE)

L152 ANSWER 47 OF 89 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 1986:353097 BIOSIS
DOCUMENT NUMBER: PREV198631058025; BR31:58025
TITLE: INTERACTIONS BETWEEN **NITRATE** AND **AMMONIUM** IN **BREAKING SEED DORMANCY** OF WILD MUSTARD SINAPIS-ARVENSIS.
AUTHOR(S): GOUDEY J S [Reprint author]; SAINI H S; SPENCER M S
CORPORATE SOURCE: DEP PLANT SCI, UNIV ALBERTA, EDM, ATLA, CANADA T6G 2P5
SOURCE: Plant Physiology (Rockville), (1986) Vol. 80, No. 4 SUPPL, pp. 29.
Meeting Info.: ANNUAL MEETING OF THE AMERICAN SOCIETY OF PLANT PHYSIOLOGISTS, BATON ROUGE, LA., USA, JUNE 8-12,

1986. PLANT PHYSIOL.
CODEN: PLPHAY. ISSN: 0032-0889.
DOCUMENT TYPE: Conference; (Meeting)
FILE SEGMENT: BR
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 30 Aug 1986
Last Updated on STN: 30 Aug 1986
ED Entered STN: 30 Aug 1986
Last Updated on STN: 30 Aug 1986
CC General biology - Symposia, transactions and proceedings 00520
Biochemistry studies - Porphyrins and bile pigments 10065
External effects - Light and darkness 10604
External effects - Temperature as a primary variable - cold 10616
Nutrition - Minerals 13206
Plant physiology - Temperature 51503
Plant physiology - Nutrition 51504
Plant physiology - Reproduction 51512
Plant physiology - Light and radiation effects 51516
IT Major Concepts
Nutrition; Radiation Biology; Reproduction
IT Miscellaneous Descriptors
ABSTRACT PHYTOCHROME COLD TEMPERATURE
ORGN Classifier
Cruciferae 25880
Super Taxa
Dicotyledones; Angiospermae; Spermatophyta; **Plantae**
Taxa Notes
Angiosperms, Dicots, **Plants**, Spermatophytes, Vascular **Plants**
RN 14797-55-8 (**NITRATE**)
14798-03-9 (**AMMONIUM**)

L152 ANSWER 48 OF 89 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 1984:294251 BIOSIS
DOCUMENT NUMBER: PREV198478030731; BA78:30731
TITLE: THE PHYSIOLOGICAL BASIS OF **SEED DORMANCY** IN AVENA-FATUA 3. ACTION OF NITROGENOUS COMPOUNDS.
AUTHOR(S): ADKINS S W [Reprint author]; SIMPSON G M; NAYLOR J M
CORPORATE SOURCE: DEP OF CROP SCI AND PLANT ECOL, J M NAYLOR, DEP OF BIOL UNIV OF SASKATCHEWAN, SASKATOON, SASKATCHEWAN, CANADA S7N 0W0
SOURCE: Physiologia Plantarum, (1984) Vol. 60, No. 2, pp. 227-233.
CODEN: PHPLAI. ISSN: 0031-9317.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
AB Sodium **nitrate** and nitrite (50-100 mM) induced germination in 3 of 4 genetically pure dormant lines of A. fatua L. The sensitivity of these treatments was low immediately after harvest and increased markedly after 6 mo. of dry after-ripening. The observation that a 4th dormant line failed to respond suggests at least 2 metabolic blocks may be involved in expression of dormancy. An inhibitor of gibberellin biosynthesis, 2-**chloroethyltrimethylammonium** chloride, completely inhibited the **dormancy-breaking** effect by **nitrate** and nitrite, indicating a requirement for gibberellin biosynthesis. Among reduced nitrogenous compounds, **ammonium** chloride and urea failed to **break dormancy** in all partly after-ripened lines, suggesting that **nitrate** and nitrite may induce germination through their ability to act as electron acceptors.

The sensitivity to all nitrogenous compounds tested increased with the length of after-ripening indicating that the depth of the 2nd dormancy block may decrease with the time of after-ripening. Other reduced nitrogenous compounds, thiourea and hydroxylamine hydrochloride, promoted some germination in the least dormant, partially after-ripened lines. The function of these compounds as electron acceptors and their similarity in activity to the cytochrome oxidase inhibitor, sodium azide, is discussed with reference to dormancy and the possible involvement of the alternative pathway of respiration.

CC Biochemistry studies - General 10060
Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Porphyrins and bile pigments 10065
Biochemistry studies - Lipids 10066
Enzymes - Physiological studies 10808
Metabolism - General metabolism and metabolic pathways 13002
Metabolism - Lipids 13006
Plant physiology - Respiration, fermentation 51508
Plant physiology - Growth, differentiation 51510
Plant physiology - Reproduction 51512
Plant physiology - Growth substances 51514
Plant physiology - Enzymes 51518
Plant physiology - Metabolism 51519
Agronomy - Weed control 52518

IT Major Concepts
Bioenergetics (Biochemistry and Molecular Biophysics); Chemical Coordination and Homeostasis; Development; Enzymology (Biochemistry and Molecular Biophysics); Metabolism; Pest Assessment Control and Management; Reproduction

IT Miscellaneous Descriptors
SODIUM **NITRATE** NITRITE 2 CHLOROETHYLTRIMETHYL **AMMONIUM** CHLORIDE GIBBERELLIN BIOSYNTHESIS **AMMONIUM** CHLORIDE UREA THIO UREA HYDROXYLAMINE HYDRO CHLORIDE CYTOCHROME OXIDASE RESPIRATION GERMINATION/

ORGN Classifier
Gramineae 25305
Super Taxa
Monocotyledones; Angiospermae; Spermatophyta; **Plantae**
Taxa Notes
Angiosperms, Monocots, **Plants**, Spermatophytes, Vascular **Plants**

RN 7631-99-4 (SODIUM **NITRATE**)
14797-65-0 (NITRITE)
999-81-5 (2-**CHLOROETHYLTRIMETHYLAMMONIUM** CHLORIDE)
12125-02-9 (**AMMONIUM** CHLORIDE)
57-13-6 (UREA)
62-56-6 (THIOUREA)
5470-11-1 (HYDROXYLAMINE HYDROCHLORIDE)
9001-16-5 (CYTOCHROME OXIDASE)
77-06-5 (GIBBERELLIN)

L152 ANSWER 49 OF 89 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 1984:222190 BIOSIS
DOCUMENT NUMBER: PREV198477055174; BA77:55174
TITLE: **SEED DORMANCY** IN RED RICE ORYZA-SATIVA 3. RESPONSE TO NITRITE **NITRATE** AND **AMMONIUM** IONS.
AUTHOR(S): COHN M A [Reprint author]; BUTERA D L; HUGHES J A
CORPORATE SOURCE: DEP PLANT PATHOL CROP PHYSIOL, LOUISANA AGRIC EXP STN, LOUISIANA STATE UNIV, BATON ROUGE, LA 70803, USA

SOURCE: Plant Physiology (Rockville), (1983) Vol. 73, No. 2, pp. 381-384.
CODEN: PLPHAY. ISSN: 0032-0889.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
AB Sodium nitrite at 10 mM **breaks dormancy** of dehulled red rice. While germination is light independent, low pH conditions (pH 3) are required for maximum response. Water and buffer controls at pH 3 remain dormant. The response to nitrite occurs at 25 and 30° C but is reduced at 20° C, although nondormant **seeds** germinate readily at this temperature. The contact time for response to nitrite is < 2 h at the start of imbibition. **Seeds** imbibed first in water show reduced germination when subsequently transferred to nitrite. Dehulled **seeds** show little or no response to **nitrate** and **ammonium** ions. Intact **seeds** remain dormant in the presence of nitrite or **nitrate** unless partially dry-afterripened. The pH dependence of nitrite sensitivity is reduced in intact, afterripening **seeds.** In highly dormant **seeds**, vacuum infiltration experiments suggest that the hull restricts uptake of nitrite.
CC Biochemistry - Physiological water studies 10011
Biochemistry studies - Minerals 10069
External effects - Light and darkness 10604
External effects - Temperature as a primary variable 10614
Nutrition - Minerals 13206
Plant physiology - Water relations 51502
Plant physiology - Temperature 51503
Plant physiology - Nutrition 51504
Plant physiology - Reproduction 51512
Plant physiology - Light and radiation effects 51516
Agronomy - Grain crops 52504
IT Major Concepts
Nutrition; Reproduction
IT Miscellaneous Descriptors
GERMINATION LIGHT WATER TEMPERATURE
ORGN Classifier
Gramineae 25305
Super Taxa
Monocotyledones; Angiospermae; Spermatophyta; **Plantae**
Taxa Notes
Angiosperms, Monocots, **Plants**, Spermatophytes, Vascular **Plants**
RN 14797-65-0 (NITRITE)
14797-55-8 (**NITRATE**)
14798-03-9 (**AMMONIUM** IONS)
7732-18-5 (WATER)

L152 ANSWER 50 OF 89 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 1980:195627 BIOSIS
DOCUMENT NUMBER: PREV198069070623; BA69:70623
TITLE: NITROGEN FERTILIZATION STIMULATES GERMINATION OF **DORMANT** PIN CHERRY PRUNUS-PENSYLVANICA **SEED**
AUTHOR(S): AUCHMOODY L R [Reprint author]
CORPORATE SOURCE: US DEP AGRIC, FOR SERV, NORTHEAST FOR EXP STN, WARREN, PA 16365, USA
SOURCE: Canadian Journal of Forest Research, (1979) Vol. 9, No. 4, pp. 514-516.

CODEN: CJFRAR. ISSN: 0045-5067.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
AB N fertilizers triggered germination of dormant P. pensylvanica L. **seed** naturally buried in the forest floor of 60 yr old Allegheny hardwood stands [northwestern Pennsylvania, USA]. Neither triple superphosphate nor muriate of potash applied with urea increased germination over that which occurred with urea alone. Rates as low as 56 kg/ha N from urea and **calcium nitrate** and 112 kg/ha N from **ammonium** sulfate stimulated germination. NO3 was apparently responsible for **breaking dormancy.**
CC Ecology: environmental biology - Plant 07506
Biochemistry studies - Minerals 10069
Nutrition - Minerals 13206
Morphology, anatomy and embryology of plants 51000
Plant physiology - Nutrition 51504
Plant physiology - Growth, differentiation 51510
Plant physiology - Reproduction 51512
Soil science - Physics and chemistry 52805
Soil science - Fertility and applied studies 52807
Forestry and forest products 53500
IT Major Concepts
Development; Ecology (Environmental Sciences); Soil Science
IT Miscellaneous Descriptors
ALLEGHENY HARDWOOD STANDS PENNSYLVANIA USA POTASH UREA **NITRATE** **AMMONIUM**
ORGN Classifier
Spermatophyta 25000
Super Taxa
Plantae
Taxa Notes
Plants, Spermatophytes, Vascular **Plants**
ORGN Classifier
Rosaceae 26675
Super Taxa
Dicotyledones; Angiospermae; Spermatophyta; **Plantae**
Taxa Notes
Angiosperms, Dicots, **Plants**, Spermatophytes, Vascular **Plants**
RN 7727-37-9 (NITROGEN)
57-13-6 (UREA)
14797-55-8 (**NITRATE**)
14798-03-9 (**AMMONIUM**)
584-08-7Q (POTASH)
1310-58-3Q (POTASH)
12136-45-7Q (POTASH)

L152 ANSWER 51 OF 89 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 1978:208814 BIOSIS
DOCUMENT NUMBER: PREV197866021311; BA66:21311
TITLE: EFFECT OF GROWTH REGULATORS AND **DORMANCY** **BREAKING** CHEMICALS ON **BUD BREAK** AND YIELD OF PALOMINO **GRAPE** VINES.
AUTHOR(S): HOPPING M E [Reprint author]
CORPORATE SOURCE: PLANT DIS DIV, DEP SCI IND RES, PRIV BAG, AUCKLAND, NZ
SOURCE: New Zealand Journal of Experimental Agriculture, (1977) Vol. 5, No. 4, pp. 339-344.
CODEN: NZJEA3. ISSN: 0301-5521.

DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH

AB Various growth regulators and **dormancy-breaking** chemicals were applied to cane-pruned **grape** vines (Vitis vinifera L. cv. (Palomino) in an attempt to increase **bud** break, **fruitful shoots** and yield. Application of morphactin to young terminal **shoots** increased subsequent **bud** break but significantly reduced yield. Similar treatments with 6-benzylaminopurine and 2-**chloroethyltrimethylammonium** chloride had no effect on **bud** break or yield. In 1 yr, thiourea (1-5%) applied 5.5 wk before anticipated **bud** break increased **bud** break, **fruitful shoots** and yield per **bud.** Otherwise, thiourea, urea, dinitro-o-cresol, NH4NO3, KNO3, Ca(NO3)2 and **calcium ammonium nitrate** applied at any time during the winter had no effect on **bud** break or **fruitful shoots. Calcium ammonium nitrate** applied in late July or late Aug. increased yield the following season without significantly decreasing berry sugar or increasing berry acid.

CC Biochemistry studies - General 10060
Biochemistry studies - Nucleic acids, purines and pyrimidines 10062
Biochemistry studies - Carbohydrates 10068
Plant physiology - Nutrition 51504
Plant physiology - Growth, differentiation 51510
Plant physiology - Reproduction 51512
Plant physiology - Growth substances 51514
Plant physiology - Chemical constituents 51522
Soil science - Fertility and applied studies 52807
Horticulture - Small fruits 53006

IT Major Concepts
Biochemistry and Molecular Biophysics; Chemical Coordination and Homeostasis; Development; Horticulture (Agriculture); Nutrition; Reproduction

IT Miscellaneous Descriptors
VITIS-VINIFERA 6 BENZYLAMINO PURINE 2 CHLOROETHYLTRIMETHYL **AMMONIUM** CHLORIDE THIO UREA UREA DI NITRO O CRESOL **AMMONIUM NITRATE POTASSIUM NITRATE CALCIUM NITRATE CALCIUM AMMONIUM NITRATE** BERRY SUGAR ACID/

ORGN Classifier
Vitaceae 26940
Super Taxa
Dicotyledones; Angiospermae; Spermatophyta; **Plantae**
Taxa Notes
Angiosperms, Dicots, **Plants**, Spermatophytes, Vascular **Plants**

RN 1214-39-7 (6 BENZYLAMINO PURINE)
999-81-5 (2 CHLOROETHYLTRIMETHYL **AMMONIUM** CHLORIDE)
62-56-6 (THIO UREA)
57-13-6 (UREA)
534-52-1Q (DI NITRO O CRESOL)
1335-85-9Q (DI NITRO O CRESOL)
6484-52-2 (AMMONIUM NITRATE)
7757-79-1 (POTASSIUM NITRATE)
10124-37-5 (CALCIUM NITRATE)
15245-12-2 (CALCIUM AMMONIUM NITRATE)

L152 ANSWER 52 OF 89 AGRICOLA Compiled and distributed by the National

 DUPLICATE 3

ACCESSION NUMBER: 1999:21540 AGRICOLA
DOCUMENT NUMBER: IND21968543
TITLE: **Surfactants** improve the response of grapevines to hydrogen cyanamide.
AUTHOR(S): Dokoozlian, N.K.; Ebisuda, N.C.; Neja, R.A.
CORPORATE SOURCE: University of California, Davis, CA.
SOURCE: HortScience : a publication of the American Society for Horticultural Science, **Aug 1998**; Vol. 33, No. 5. p. 857-859
Publisher: Alexandria, Va. : The American Society for Horticultural Science.
CODEN: HJHSAR; ISSN: 0018-5345
NOTE: Includes references
PUB. COUNTRY: United States; Virginia
DOCUMENT TYPE: Article
FILE SEGMENT: U.S. Imprints not USDA, Experiment or Extension
LANGUAGE: English

AB The effects of **surfactants** on the efficacy of hydrogen cyanamide (H2CN2) applied to 'Perlette' grapevines (Vitis vinifera L.) grown in the Coachella Valley of California were examined in 1994 and 1995. Vines were pruned in mid-December in both years and treatments applied at 1000 L(.)ha-1 the following day to dormant spurs and cordons using a hand-held spray wand. In 1994, H2CN2 was applied at 0.5%, 1%, or 2% by volume in combination with 0%, 0.5%, 1%, 2%, or 3% by volume of the amine-based **surfactant Armobreak.** In 1995, H2CN2 was applied at 0.5%, 1%, or 2% by volume in combination with **Armobreak** at 0% or 2% by volume. In 1994, budbreak rate was highly dependent upon H2CN2 concentration when 0% to 1% **Armobreak** was used; budbreak was generally most rapid for vines treated with 2% H2CN2 and slowest for vines treated with 0.5% H2CN2. When 2% or 3% **Armobreak** was used, however, little effect of H2CN2 concentration was observed. Results were similar in 1995, but the budbreak of vines treated with 2% H2CN2 + 2% **Armobreak** lagged behind that of vines treated with 1% H2CN2 + 2% **Armobreak.** The number of days after treatment required for 70% budbreak generally declined as the concentrations of H2CN2 and **Armobreak** were increased. A separate experiment conducted in 1995 revealed that several **surfactants** varying in chemical composition, **Armobreak**, Activator 90 and Agridex, had similar effects on H2CN2 efficacy. The results indicate that the addition of **surfactants** to H2CN2 solutions **can** significantly reduce the amount of active ingredient necessary for maximum efficacy on grapevines.

L152 ANSWER 53 OF 89 AGRICOLA

ACCESSION NUMBER: 89:46454 AGRICOLA
DOCUMENT NUMBER: IND89019380
TITLE: **Breaking seed dormancy** in some grasses of Indian arid zone.
AUTHOR(S): Kumari, J.; Thomas, T.P.; Sen, D.N.
AVAILABILITY: DNAL (QH301.A1G4)
SOURCE: Geobios, **Jan 1987**; Vol. 14, No. 1. p. 131-133
Publisher: Jodhphur : Dr. David N. Sen.
CODEN: GEBSAJ; ISSN: 0251-1223

NOTE: Includes references.
DOCUMENT TYPE: Article
FILE SEGMENT: Non-U.S. Imprint other than FAO
LANGUAGE: English

L152 ANSWER 54 OF 89 CABA COPYRIGHT 2005 CABI on STN
ACCESSION NUMBER: 2000:89953 CABA
DOCUMENT NUMBER: 20000311258
TITLE: The effect of the **rest-breaking** agent, **Armobreak**(R) in combination with **potassium nitrate**, on the efficacy of Armothin(R) as a chemical blossom thinner for 'Sunlite' nectarines
AUTHOR: Coetzee, J. H.; Theron, K. I.
CORPORATE SOURCE: Department of Horticultural Science, University of Stellenbosch, Private Bag X1, 7602 Matieland, South Africa.
SOURCE: Journal of the Southern African Society for Horticultural Sciences, (**1999**) Vol. 9, No. 1, pp. 18-20. 13 ref.
ISSN: 1017-0316
DOCUMENT TYPE: Journal
LANGUAGE: English
ENTRY DATE: Entered STN: 20000809
Last Updated on STN: 20000809

ED Entered STN: 20000809
Last Updated on STN: 20000809

AB In this trial a **rest-breaking** treatment (2% **Armobreak** [alkoxylated fatty alkylamine polymer] + 60 g/litre **potassium nitrate**) was applied 3 weeks before normal bud break to shorten the flowering period of nectarines cv. Sunlite and thereby enhance the efficacy of the thinning chemical. As a chemical thinner, a **surfactant**, Armothin [a fatty amine polymer] (1, 2 and 3%; Akzo Nobel Chemicals, Netherlands), was applied during full bloom (80% open blossoms). Blossoms on control trees were thinned by hand. The **rest-breaking** treatment delayed bud **break** of reproductive buds, did not affect vegetative bud break and reduced fruit set and yield compared with the unsprayed control. The **rest-breaking** treatment did not affect the efficacy of Armothin. Armothin at 3% was most effective in reducing fruit set, but was not as effective as the hand-thinned control. Fruit size on Armothin treatments was smaller than on the control, because Armothin did not cause an immediate thinning effect. Armothin applied at full bloom did not achieve sufficient thinning at an early enough stage to replace blossom thinning by hand.

L152 ANSWER 55 OF 89 CABA COPYRIGHT 2005 CABI on STN
ACCESSION NUMBER: 1998:78401 CABA
DOCUMENT NUMBER: 19980305300
TITLE: Branch induction using hydrogen cyanamide and Promalin
AUTHOR: Jackson, J. E.; Barritt, B. H. [EDITOR]; Kappel, F. [EDITOR]
CORPORATE SOURCE: Horticultural Research Centre, P. Bag 3748, Marondera, Zimbabwe.
SOURCE: Acta Horticulturae, (**1997**) No. 451, pp. 679-681. 3 ref.
Price: Conference paper; Journal article
Meeting Info.: Proceedings of the sixth international symposium on integrating canopy,

rootstocks and environmental physiology in orchard systems, Wenatchee, Washington, USA, and Penticton, British Columbia, Canada, 17-25 July, 1996, Volume 2.
ISSN: 0567-7572; ISBN: 90-6605-919-2
DOCUMENT TYPE: Journal
LANGUAGE: English
ENTRY DATE: Entered STN: 19980611
Last Updated on STN: 19980611

ED Entered STN: 19980611
Last Updated on STN: 19980611

AB A trial was established in 1994 at a farm in Zimbabwe to investigate the effect of chemical methods for **breaking** bud **dormancy** and reducing apical dominance, both problems of growing apples in tropical environments. The cultivar Mutsu was headed back after planting in August and the trees were treated with KNO3 + **Armobreak** ([alkoxylated fatty alkylamine polymer] an adjuvant which increases the effectiveness of a number of **dormancy breaking** chemicals), Dormex (hydrogen cyanamide) with or without **Armobreak**, and Promalin (BA and GA4+7) at intervals up to 19 September. Applications were made with a paint brush. The most effective treatments were 3% Dormex applied on 26 August and 5% Promalin applied on 19 September. Dormex induced budbreak while Promalin induced laterals to develop on the leading shoot. It is suggested that a combination of Dormex and Promalin would be effective in producing well-feathered trees from unbranched whips.

L152 ANSWER 56 OF 89 CABA COPYRIGHT 2005 CABI on STN
ACCESSION NUMBER: 1998:78864 CABA
DOCUMENT NUMBER: 19980305763
TITLE: Forced production of guava in the greenhouse
Produccion forzada de guayabo **en** invernadero
AUTHOR: Otero Sanchez, M. A.; Becerril Roman, A. E.; Alcantar Gonzalez, G.; Mosqueda Vazquez, R.
CORPORATE SOURCE: Colegio Superior Agricola del Estado de Guerrero, Colonia Centro, 40000 Iguala, Guerrero, Mexico.
SOURCE: Agrociencia, (1997) Vol. 31, No. 3, pp. 285-290. 20 ref.
DOCUMENT TYPE: Journal
LANGUAGE: Spanish
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 19980611
Last Updated on STN: 19980611

ED Entered STN: 19980611
Last Updated on STN: 19980611

AB In greenhouse trials, **plants** of guava cv. Media China were subjected in mid-December 1989 to water stress sufficient to induce abscission of 50% of foliage or to foliar sprays of Ethrel [ethephon] (1 ml/litre), KNO3 (10 or 40 g/litre) or NH4NO3 (10 g/litre) or to soil application of KNO3 or NH4NO3 (80 kg N/ha). Only the lowest rates of KNO3 applied more than once (in 10 weekly applications). Before ruary-5 March), growth of secondary branches was en **budbreak** and mid-April reached a further 3-9 of 10 g NH4NO3/litre over 10 weeks resulted in the most nd largest numbers of branches and sprouted **buds** its, reaching 200% of values from and 1000% more than in untreated **plants.** tive growth was correlated with highest foliar total and reduced N and, in most cases, **fruit shoots.**

L152 ANSWER 57 OF 89 CABA COPYRIGHT 2005 CABI on STN
ACCESSION NUMBER: 1998:161829 CABA
DOCUMENT NUMBER: 19980311245
TITLE: Effect of **dormancy breaking** agents with **Armobreak** in the peach
AUTHOR: Erez, A.; Yablowitz, Z.; Kuden, A. B. [EDITOR]; Dennis, F. G., Jr. [EDITOR]
CORPORATE SOURCE: A.R.O., The Volcani Center, Institute of Horticulture, P.O. Box 6, Bet-Dagan, 50250, Israel.
SOURCE: Acta Horticulturae, (**1997**) No. 441, pp. 183-190. 3 ref.
Price: Conference paper; Journal article
Meeting Info.: Proceedings of the fifth international symposium on temperate zone fruits in the tropics and subtropics, Adana, Turkey, 29 May-1 June, 1996.
ISSN: 0567-7572; ISBN: 90-6605-948-6
DOCUMENT TYPE: Journal
LANGUAGE: English
ENTRY DATE: Entered STN: 19981111
Last Updated on STN: 19981111

ED Entered STN: 19981111
Last Updated on STN: 19981111
AB Trials were conducted over 3 years (1994-96) in the central coastal plain of Israel in order to investigate the effect of **Armobreak** (a fatty amine produced in the Netherlands) as an adjuvant to KNO3 and GA3 for **breaking dormancy** in the peach cultivars Earligrande, Rhodes and Summerset (low, medium-low and high chilling cultivars, respectively), and cv. Flavortop nectarine (medium-high chilling). Results showed that **Armobreak** allowed a reduction in the concentration of other **dormancy breaking** chemicals and still produced a positive effect, particularly with KNO3. A specific characteristic of **Armobreak** is its ability to advance flowering especially when used with low concentrations of other chemicals.

L152 ANSWER 58 OF 89 CABA COPYRIGHT 2005 CABI on STN
ACCESSION NUMBER: 97:58265 CABA
DOCUMENT NUMBER: 19970304235
TITLE: The roles of inorganic nitrogen salts in maintaining phytochrome- and gibberellin A3-mediated germination control in skotodormant lettuce **seeds**
AUTHOR: Hsiao, A. I.; Quick, W. A.
CORPORATE SOURCE: Agriculture and Agri-Food Canada, Research Station, Box 440, Regina S4P 3A2, Canada.
SOURCE: Journal of Plant Growth Regulation, (**1996**) Vol. 15, No. 4, pp. 159-165. 25 ref.
ISSN: 0721-7595
DOCUMENT TYPE: Journal
LANGUAGE: English
ENTRY DATE: Entered STN: 19970612
Last Updated on STN: 19970612

ED Entered STN: 19970612
Last Updated on STN: 19970612
AB Skotodormant **seeds** of lettuce cv. Grand Rapids imbibed in darkness for 10 days (10-day DS) germinated poorly upon terminal treatment with red light (R) or GA3. Inorganic N salts in the imbibition solutions reduced **seed** skotodormancy. Ten-day DS **seeds**, imbibed in 25 mM salt solutions followed by terminal R, showed 99% germination if imbibed in NH4NO3, 70% if imbibed in KNO3 or NH4Cl, and 55% if imbibed in

NaNO3. **Seeds** imbibed in higher salt concentrations germinated fully upon terminal R treatment. **Seeds** imbibed in 25 mM NH4Cl or in 50 mM NH4NO3 germinated completely upon GA3 treatment. Osmotic effects of imbibition media accounted for only part of the effect, since **seeds** imbibed in 50 mM CaCl2 or NaCl germinated poorly following R or GA3 treatment. **Seeds** imbibed in 500 mM polyethylene glycol (PEG) 1000 or mannitol solutions for 10 days still exhibited skotodormancy. Treatments of R or GA3 did not stimulate germination in **seeds** imbibed in mannitol, but germination was complete if **seeds** were immersed in acid for 1 h then rinsed in water before the terminal R or GA3 treatment. Terminal R promoted germination in **seeds** imbibed in 50-500 mM PEG during 10-day DS, but terminal GA3 significantly improved germination only in **seeds** imbibed at 500 mM PEG. Pfr appeared to function in mannitol-imbibed **seeds** only after an acid treatment. **Seed** exposure to inorganic N nitrogen salts during the 10-day DS maintained **seed** sensitivity to terminal R or GA3 treatment. The depth of **seed** skotodormancy was related to the availability of inorganic N and also involved the levels of Pfr or endogenous GA3.

L152 ANSWER 59 OF 89 CABA COPYRIGHT 2005 CABI on STN
ACCESSION NUMBER: 95:152701 CABA
DOCUMENT NUMBER: 19950311913
TITLE: Means to compensate for insufficient chilling to improve bloom and leafing
AUTHOR: Erez, A.; Powell, L. E. [EDITOR]; Iwahori, S. [EDITOR]; Couvillon, G. A. [EDITOR]
CORPORATE SOURCE: Institute of Horticulture, Volcani Centre, Bet Dagan 50250, Israel.
SOURCE: Acta Horticulturae, (**1995**) No. 395, pp. 81-95. 50 ref.
Price: Conference paper; Journal article
Meeting Info.: Dormancy and the related problems of deciduous fruit trees. XXIV International horticultural congress, Kyoto, Japan, 21-27 Aug. 1994.
ISSN: 0567-7572; ISBN: 90-6605-496-4
DOCUMENT TYPE: Journal
LANGUAGE: English
ENTRY DATE: Entered STN: 19950921
Last Updated on STN: 19950921
ED Entered STN: 19950921
Last Updated on STN: 19950921
AB In tropical climates temperate fruit trees experience insufficient chilling to overcome winter dormancy. This is mainly due to high day temperatures (<more or =>19[deg]C) negating the effects of chilling night temperatures (<less or =>12[deg]). Overhead irrigation with micro-sprinklers **can** be used to cool the buds in the daytime. Cultivars with a low chilling requirement **can** also be grown. Cultural practices **can** be adopted that reduce the chilling requirement, such as controlling tree vigour, training to a horizontal tree form, preventing late vegetative growth and/or delaying winter pruning. The main **dormancy breaking** agent, mineral oil plus DNOC, has recently been banned in Israel. Oil plus cyanamide has been found to be an effective substitute in apples. Combinations of oil, KNO3, gibberellic acid, cyanamide and a new penetrator (**Armobreak**), have been found effective for stone fruits.

L152 ANSWER 60 OF 89 CABA COPYRIGHT 2005 CABI on STN
ACCESSION NUMBER: 96:32577 CABA

DOCUMENT NUMBER: 19960700991
TITLE: Effect of several treatments for **breaking dormancy** in pasture **seeds.** II. Brachiaria decumbens
Efecto de algunos tratamientos para interrumpir el reposo **en** semillas de pastos. II. Brachiaria decumbens
AUTHOR: Herrera, J.
CORPORATE SOURCE: Centro para Investigaciones en Granos y Semillas, Universidad de Costa Rica, San Jose, Costa Rica.
SOURCE: Agronomia Costarricense, **(1994)** Vol. 18, No. 1, pp. 75-85. 19 ref.
ISSN: 0377-9424
DOCUMENT TYPE: Journal
LANGUAGE: Spanish
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 19960318
Last Updated on STN: 19960318

ED Entered STN: 19960318
Last Updated on STN: 19960318
AB Recently harvested and dried **seeds** of B. decumbens were immersed for 4 mins in concentrated sulphuric acid, for 2 h in 0.6% KNO3 or 4% hydrogen cyanamide or for 4 mins in sulphuric acid followed by immersion in either hydrogen cyanamide or KNO3 before germination on a thermogradient table at 12-28[deg]C. Hydrogen cyanamide completely inhibited germination recorded after 14 days, whereas sulphuric acid and/or KNO3 significantly increased germination percentage, the highest rate occurring at 20-25[deg]C, and immersion in sulphuric acid for 8-12 mins followed by 0.8% KNO3 for 2 h increased germination percentage to 60%. Storage for up to 6 months after treatment significantly increased germination percentage in **seeds** treated with KNO3 but reduced germination percentage in those treated with sulphuric acid.

L152 ANSWER 61 OF 89 CABA COPYRIGHT 2005 CABI on STN
ACCESSION NUMBER: 96:32576 CABA
DOCUMENT NUMBER: 19960700990
TITLE: Effect of several treatments for **breaking dormancy** in pasture **seeds.** I. Paspalum notatum
Efecto de algunos tratamientos par interrumpir el reposo **en** semillas de pastos. I. Paspalum notatum
AUTHOR: Herrera, J.
CORPORATE SOURCE: Centro para Investigaciones en Granos y Semillas, Universidad de Costa Rica, San Jose, Costa Rica.
SOURCE: Agronomia Costarricense, **(1994)** Vol. 18, No. 1, pp. 67-74. 23 ref.
ISSN: 0377-9424
DOCUMENT TYPE: Journal
LANGUAGE: Spanish
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 19960318
Last Updated on STN: 19960318

ED Entered STN: 19960318
Last Updated on STN: 19960318
AB Commercially dried samples of P. notatum **seed** with initial germination rate of 3.5% and a high proportion of viable hard **seed** was immersed for 1 h in 5-40 mg/litre forchlorfenuron or 0.5-8% commercial hydrogen cyanamide (50% a.i.), in tap water at 40[deg]C for 24-96 h or in concentrated sulphuric acid for 1-8 min or were maintained for the same

periods at the same temperatures in contact with 0.15-0.75% KNO3 before transferring to growth chambers at 30[deg]C and 98% RH for 28 days. Germination percentage was highest following immersion in H2SO4 (29.5%) and hydrogen cyanamide (24.5%); however immersion in the H2SO4 for 4 min followed by immersion for 2 h in hydrogen cyanamide (4%) or KNO3 (0.8%) increased germination to 59% and 47.5%, respectively.

L152 ANSWER 62 OF 89 CABA COPYRIGHT 2005 CABI on STN
ACCESSION NUMBER: 95:45035 CABA
DOCUMENT NUMBER: 19950302212
TITLE: A technique to overcome **dormancy** in **apples** for continuous cropping in the Colombian highlands
Tecnica de suprimir el reposo del manzano para cosechas continuas **en** el altiplano Colombiano
AUTHOR: Fischer, G.
CORPORATE SOURCE: Programa de Postgrado "Frutales de Clima Frio", Universidad Pedagogica y Tecnologica de Colombia, Tunja, Colombia.
SOURCE: Proceedings of the Interamerican Society for Tropical Horticulture, (1992) Vol. 36, pp. 49-54. 16 ref.
Price: Conference paper; Journal article
Meeting Info.: XXXVIII Annual meeting of the Interamerican Society for Tropical Horticulture, Tegucigalpa, Honduras, 20-26 Sep. 1992.
ISSN: 0245-2528
DOCUMENT TYPE: Journal
LANGUAGE: Spanish
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 19950313
Last Updated on STN: 19950313

ED Entered STN: 19950313
Last Updated on STN: 19950313

AB In the Colombian highlands, with altitudes between 1700 and 2700 m and average temperatures of 13-20[deg]C, there are 3 microclimates for **apple** growing: a unimodal rain pattern, a bimodal pattern with dry seasons, and a bimodal, humid pattern. In the unimodal pattern, **apple trees** undergo a deep dormancy during the rainy season and produce only one crop per year, whereas continuous cropping is possible in the other 2 microclimates by using rest avoidance techniques. A series of steps - (1) stop irrigation, (2) harvest, (3) defoliate, (4) prune, (5) irrigate, and (6) spray with a **dormancy-breaking** chemical (e.g. hydrogen cyanamide or **potassium nitrate**) - is proposed. It is suggested that by following these steps and by applying supplementary fertilizer and controlling pests, the next **flowering can** be achieved 6-10 weeks after harvest.

L152 ANSWER 63 OF 89 CABA COPYRIGHT 2005 CABI on STN
ACCESSION NUMBER: 88:377 CABA
DOCUMENT NUMBER: 19870348343
TITLE: Quality-improving methods for the cultivation of Hanepoot stalk raisins
AUTHOR: Geldenhuys, R.
CORPORATE SOURCE: Dried Fruit Board, Wellington, South Africa.
SOURCE: Deciduous Fruit Grower, (1986) Vol. 36, No. 12, pp. 509-514. 5 pl. 8 ref.
ISSN: 0302-7074

DOCUMENT TYPE: Journal
LANGUAGE: English; Afrikaans
ENTRY DATE: Entered STN: 19941101
Last Updated on STN: 19941101

ED Entered STN: 19941101
Last Updated on STN: 19941101

AB Data are presented from 2-year trials on the effects of bunch thinning, and different times and severity of pruning followed or not by spraying with the **dormancy-breaking** agents cyanamide (2.5%) and **urea ammonium nitrate** (UAN). Average berry and bunch sizes were greatest with very late pruning when the **buds** at the **shoot** tips were beginning to grow. Bunch density was least with bunch thinning and late pruning. The drying ratio was acceptable with most treatments, but UAN spraying was detrimental. The highest yields (31 t/ha) and returns were obtained with spur pruning in early August followed by cyanamide spraying with repeated removal of suckers. CCC [chlormequat] at 250 or 500 p.p.m. applied about 10 days before **flowering** improved berry set but reduced berry size.

L152 ANSWER 64 OF 89 CABA COPYRIGHT 2005 CABI on STN
ACCESSION NUMBER: 86:98242 CABA
DOCUMENT NUMBER: 19860612418
TITLE: **Dormancy** of apical **buds** of ash (Fraxinus excelsior): evaluation of the nucleotide triphosphate pool and the range of temperatures which affect **bud break** during **dormancy**
Dormance des bourgeons apicaux du frene (Fraxinus excelsior L.): evaluation du pool des nucleosides triphosphates et eventail des temperatures actives sur le debourrement des bourgeons **en** periode de dormance
AUTHOR: Barnola, P.; Lavarenne, S.; Gendraud, M.
CORPORATE SOURCE: Univ. Clermont II, Lab. Phytomorphogenese UA 45, CNRS, 4, rue Ledru, 63038 Clermont-Ferrand Cedex, France.
SOURCE: Annales des Sciences Forestieres, (**1986**) Vol. 43, No. 3, pp. 339-349. 32 ref.
ISSN: 0003-4312
DOCUMENT TYPE: Journal
LANGUAGE: French
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 19941101
Last Updated on STN: 19941101

ED Entered STN: 19941101
Last Updated on STN: 19941101

AB Dormancy of **buds** of woody **plants** is usually studied using cuttings of isolated nodes placed in controlled environment chambers at temperature of 5[deg]-30[deg]C. The deeper the dormancy of a **bud**, the smaller the temperature range in which growth occurs, and it will only open at high temperature **Breaking** of **dormancy** is characterized by its opening at low temperature This concept put forward by Vegis has the disadvantage that the length of the trial is sufficient for the **bud** to pass into a new physiological state, different from that at the time of sampling. A new biochemical technique is proposed, based on changes in cellular energy regulation in relation to state of dormancy. Measurement was made of the ability of the **plant** material to increase its non-adenylated nucleotide triphosphate contents following the introduction of an external precursor of ATP. The results of this study are that the ideas of Vegis **can** be expressed biochemically for

the first time. In Sept., at the start of dormancy, **bud** burst occurred in ash at 16[deg]-25[deg]C; in Dec. no **bud** burst took place; in March, at the end of dormancy, **bud** burst was greatest at 8[deg]-16[deg]C.

L152 ANSWER 65 OF 89 CABA COPYRIGHT 2005 CABI on STN
ACCESSION NUMBER: 88:126607 CABA
DOCUMENT NUMBER: 19880719345
TITLE: Effects of different methods of **breaking seed dormancy** of Brachiaria humidicola (Rendle) Schweickerdt
Efeitos de diferentes metodos para a quebra da dormencia **en** sementes de Brachiaria humidicola (Rendle) Schweickerdt
AUTHOR: Rodrigues, J. D.; Delachiave, M. H. A.; Rodrigues, S. D.; Pedras, J. F.; Gaeti, O. B. N.
CORPORATE SOURCE: Dep. Bot., Univ. Estadual de Sao Paulo, 18.600 Botucatu, SP, Brazil.
SOURCE: Cientifica, (**1986**) Vol. 14, No. 1-2, pp. 65-72. 24 ref.
DOCUMENT TYPE: Journal
LANGUAGE: Portuguese
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 19941101
Last Updated on STN: 19941101
ED Entered STN: 19941101
Last Updated on STN: 19941101
AB Washed and unwashed B. humidicola **seeds** were chemically (**potassium nitrate**, gibberellic acid and sulphuric acid) or mechanically scarified and submitted to a constant (30[deg]C) or alternating (20/35[deg], 16 h/8 h) temperature regime in the presence or absence of light. None of the **dormancy breaking** methods were successful at 30[deg]. Treating washed **seeds** with gibberellic acid followed by an alternating temperature regime was the most effective **dormancy breaking** method (51.5% germination). Sulphuric acid and light treatments were ineffective for **breaking seed dormancy.**

L152 ANSWER 66 OF 89 CABA COPYRIGHT 2005 CABI on STN
ACCESSION NUMBER: 87:63114 CABA
DOCUMENT NUMBER: 19870616510
TITLE: Improving **breaking** of **dormancy** in wild cherry in the nursery
Pour une meilleure levee du merisier **en** pepiniere
AUTHOR: Francois, J. M.; Carrio, J. L.
CORPORATE SOURCE: IDF, 75007 Paris, France.
SOURCE: Foret-Entreprise, (**1986**) No. 38, pp. 53-59.
ISSN: 0150-6404
DOCUMENT TYPE: Journal
LANGUAGE: French
ENTRY DATE: Entered STN: 19941101
Last Updated on STN: 19941101
ED Entered STN: 19941101
Last Updated on STN: 19941101
AB Studies showed that there was no effect of provenance, **tree** or **seed** size on germination of Prunus avium **seed.** The most important factors were **seed** m.c. and treatment. Dormancy of

dried **seed can** only be broken by stratification with alternating temperature of 20[deg] and 3[deg]C. With fresh **seed**, best results were obtained with autumn sowing.

L152 ANSWER 67 OF 89 CABA COPYRIGHT 2005 CABI on STN
ACCESSION NUMBER: 86:76810 CABA
DOCUMENT NUMBER: 19860790113
TITLE: Response of young grapes to dormant contact applications with oxyfluorfen
AUTHOR: Schlesselman, J. T.
CORPORATE SOURCE: Rohm and Haas Co., Reedley, CA 93654, USA.
SOURCE: Proceedings of the Western Society of Weed Science, (**1985**) No. Vol.38, pp. 184-187. Meeting Info.: Proceedings of the Western Society of Weed Science.
DOCUMENT TYPE: Conference Article
LANGUAGE: English
ENTRY DATE: Entered STN: 19941101
Last Updated on STN: 19941101
ED Entered STN: 19941101
Last Updated on STN: 19941101
AB In 15 studies with 12 grape cv., 0.03-8.0 lb oxyfluorfen/acre was applied to grapes at various stages between **dormancy** and bud **break.** Response to the herbicide evidenced by stunting and distortion of the first few leaves increased as time of application approached bud break, but recovery was generally complete. Differences in spray volume or added **surfactant** did not affect results. Oxyfluorfen **can** be applied safely to young grapes provided that the buds are dormant.

L152 ANSWER 68 OF 89 CABA COPYRIGHT 2005 CABI on STN
ACCESSION NUMBER: 88:93213 CABA
DOCUMENT NUMBER: 19881113202
TITLE: The effect of several methods for **breaking seed dormancy** in spurred anoda (Anoda cristata (L.) Schlecht)
Efectos de distintos metodos para la ruptura de la dormicion **en** semilla de malva (Anoda cristata (L.) Schlecht)
AUTHOR: Faccini, D.; Giuggia, E.; Ramirez, H.; Mitidieri, A.
CORPORATE SOURCE: Univ. Nac. de Rosario, Rosaria, Argentina.
SOURCE: Revista de Investigaciones Agropecuarias, (**1985**) Vol. 20, No. 1, pp. 69-85. 4 ref.
DOCUMENT TYPE: Journal
LANGUAGE: Spanish
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 19941101
Last Updated on STN: 19941101
ED Entered STN: 19941101
Last Updated on STN: 19941101
AB Light scarification by cutting at the tip, base and dorsal side of A. cristata **seeds** caused **dormancy breaking**, resulting in 46.4-68.8% germination; germination of control **seed** was 1.1-9.1%. Intense cutting at the tip caused more injury to the embryo than cutting at the base. Cutting away 30-50% of the **seed** tip significantly reduced germination in comparison with scarification at the **seed** base. Light, intense and very intense scarification of the **seed** tip caused 57, 32 and 11% germination, resp. For Sorghum halepense **seed**, light scarification was ineffective whilst intense scarification gave 87% germination. Immersion in concn sulphuric

acid for 1-150 min increased A. cristata germination; the increase was linear for immersion times of 1-12 min. With immersion times >200 min the percentage germination decreased reaching a value of 4.6% after immersion for 4000 min. Tetrazolium tests indicated that **seed** viability was 89 to 98%. Thermal scarification effectively induced germination, the optimum treatment being 10-20 min immersion for 1-year-old or recently harvested **seed**. Application of 2 or 20 mM **potassium nitrate** and 100 p.p.m. gibberellic acid solution increased germination percentage of tip scarified **seed**, but not significantly.

L152 ANSWER 69 OF 89 CABA COPYRIGHT 2005 CABI on STN
ACCESSION NUMBER: 85:62228 CABA
DOCUMENT NUMBER: 19850776306
TITLE: Effect of KNO3 on **breaking** of **dormancy** of **seeds** of Guinea grass cv. Likoni. II. Cold storage
Efecto del KNO3 **en** la ruptura de la dormancia de semillas de guinea cv. Likoni. II. Almacenada **en** frio
AUTHOR: Gonzalez, Y.; Torriente, O.
CORPORATE SOURCE: Estacion Experimental de Pastos y Forrajes "Indio Hatuey", Perico, Matanzas, Cuba.
SOURCE: Pastos y Forrajes, **(1984)** Vol. 7, No. 3, pp. 355-367. 17 ref.
ISSN: 0864-0394
DOCUMENT TYPE: Journal
LANGUAGE: Spanish
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 19941101
Last Updated on STN: 19941101
ED Entered STN: 19941101
Last Updated on STN: 19941101
AB **Seeds** of Panicum maximum cv. Likoni, stored for 0-7 months in a controlled temperature environment, were soaked for 24 h in 0, 0.1, 0.2 or 0.4% KNO3 solution prior to germination testing. Soaking in 0.1-0.4% KNO3 increased the percentage of normal **seedlings** and germinative energy of **seeds** stored for up to 4 and 5 months, resp. Data on the percentage of viable and rotted **seeds** with the various treatments are presented. It was concluded that soaking in 0.2-0.4% KNO3 could increase the germination of **seeds** stored for 3 months by >15%.

L152 ANSWER 70 OF 89 CABA COPYRIGHT 2005 CABI on STN
ACCESSION NUMBER: 85:39804 CABA
DOCUMENT NUMBER: 19850774229
TITLE: Regulation of **dormancy** and germination by nitrogenous compounds in the **seeds** of Sisymbrium officinale L. (hedge mustard)
AUTHOR: Karssen, C. M.; Vries, B. de
CORPORATE SOURCE: Dep. of Pl. Physiol., Agric. Univ., 6703 BD Wageningen, Netherlands.
SOURCE: Aspects of Applied Biology, **(1983)** No. 4, pp. 47-54. 14 ref.
Price: Conference paper; Journal article
ISSN: 0265-1491
DOCUMENT TYPE: Journal
LANGUAGE: English
ENTRY DATE: Entered STN: 19941101
Last Updated on STN: 19941101

ED Entered STN: 19941101
Last Updated on STN: 19941101
AB The effects of **nitrates** and **ammonium** salts were tested on the **breaking** of primary and secondary **dormancy**, the stimulation of germination and the induction of secondary dormancy in **seeds** of S. officinale. After a pretreatment at 2[deg]C in water and darkness, the **seeds** required the combined action of **nitrate** and light, given as a short saturating red light dose, to stimulate germination. **Ammonium** salts were less active or inactive. Nitrogenous compounds did not exert any effect at low temperature If after a pretreatment at 2[deg] the **seeds** were incubated for a few days at 24[deg] in darkness, the **seeds** required **ammonium** salts instead of **nitrates** to stimulate germination in combination with light. A 2nd incubation at 2[deg] reinduced the sensitivity to **nitrates.**

L152 ANSWER 71 OF 89 CABA COPYRIGHT 2005 CABI on STN
ACCESSION NUMBER: 80:13526 CABA
DOCUMENT NUMBER: 19800383805
TITLE: Physiology of peach meristems in tropical conditions. Effect of some chemical substances for the modification of **dormancy**
Fisiologia de los meristemos del melocotonero (Prunus persica (L) Batsch) **en** condiciones tropicales. Efecto de algunas sustancias quimicas para modificar el reposo
AUTHOR: Sancho, G.; Arias, O.
CORPORATE SOURCE: Universidad de Costa Rica, San Jose, Costa Rica.
SOURCE: Agronomia Costarricense, (1979) Vol. 3, No. 2, pp. 151-159. 14 ref.
ISSN: 0377-9424
DOCUMENT TYPE: Journal
LANGUAGE: Spanish
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 19941101
Last Updated on STN: 19941101
ED Entered STN: 19941101
Last Updated on STN: 19941101
AB In studies with the peach cv. Big Boston, the **shoots** were sprayed once between August and November with thiourea (2%), DNOC (0.2%), a mineral oil (4%), KNO3 (2%) or GA (0.02%) or with mixtures of these chemicals. **Bud** sprouting in general showed a diminishing gradient from the apex to the base of the **shoots** for both vegetative and **flower buds. Buds** which received no chemical treatment showed deep dormancy of over 2 months. Mineral oil alone or + DNOC was the most effective treatment for **breaking dormancy.** The best time for application was September, when the **buds** entered a phase of light dormancy which was followed by a 2nd phase of deep dormancy.

L152 ANSWER 72 OF 89 CABA COPYRIGHT 2005 CABI on STN
ACCESSION NUMBER: 80:14460 CABA
DOCUMENT NUMBER: 19800385187
TITLE: Studies on chemical **dormancy breaking** in deciduous **fruit trees** [and **grapevines**]
AUTHOR: Morimoto, F. R.; Kumashiro, K.
CORPORATE SOURCE: Shinshu University, Ina, Nagano-Ken, Japan.
SOURCE: Journal of the Faculty of Agriculture Shinshu University, (1978) Vol. 15, No. 1, pp.

1-18. 31 ref.
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 19941101
Last Updated on STN: 19941101
ED Entered STN: 19941101
Last Updated on STN: 19941101
AB Lime nitrogen [nitro-chalk] sprayed in the winter on **trees** of the **apple** cv. Fuji, pear cv. Bartlett and peach cv. Kanto No.2 and on **grapevines** cv. Kyoho, induced sprouting of the **buds.** In another trial coating the **buds** with lime nitrogen, thiourea, **potassium nitrate** and/or Merit (foliar fertilizer) induced sprouting only when lime nitrogen was present in the coating mixture.

L152 ANSWER 73 OF 89 CABA COPYRIGHT 2005 CABI on STN
ACCESSION NUMBER: 76:120361 CABA
DOCUMENT NUMBER: 19762312349
TITLE: **Breaking seed dormancy** in Avena fatua L
AUTHOR: Chancellor, R. J.; Catizone, P.; Peters, N. C. B.
CORPORATE SOURCE: A.R.C. Weed Res. Org., Begbroke Hill, Yarnton, Oxford OX5 1PF, UK.
SOURCE: Symposium on Status, Biology and Control of Grassweeds in Europe; organised by E.W.R.S. and COLUMA, Paris, 1975, (**1975**) No. Vol. 1, pp. 95-102. 9 ref.
Meeting Info.: Symposium on Status, Biology and Control of Grassweeds in Europe; organised by E.W.R.S. and COLUMA, Paris, 1975.
DOCUMENT TYPE: Conference Article
LANGUAGE: English
ENTRY DATE: Entered STN: 19941101
Last Updated on STN: 19941101
ED Entered STN: 19941101
Last Updated on STN: 19941101
AB In an attempt to **break seed dormancy** of A. fatua, 17 growth-regulatory chemicals, various environmental conditions, inorganic nitrogen compounds and GA3 were tested on various batches of **seed.** None of the growth-regulatory chemicals had any effect on dormancy. The nitrogenous compounds had a small effect, **ammonium nitrate** and urea at 100 ppm being the most effective. GA3 at 1000 ppm sometimes increased germination of dormant **seed**; lower concns. did also, if Agral 90 (90% alkyl phenol ethylene oxide condensate) at 0.5% was added. Germination of non-dormant **seeds** was, however, reduced by Agral 90. The results suggest that there may be some interaction between GA3 and age of **seed.**

L152 ANSWER 74 OF 89 CABA COPYRIGHT 2005 CABI on STN
ACCESSION NUMBER: 73:118234 CABA
DOCUMENT NUMBER: 19732301890
TITLE: The use of **plant** growth regulators in the control of Agropyron repens
AUTHOR: Caseley, J.
CORPORATE SOURCE: ARC Weed Res. Org., Yarnton, Oxford OX5 1PF, UK.
SOURCE: Proceedings 11th British Weed Control Conference, (**1972**) pp. 736-743. 11 ref.London, British Crop Protection Council
Meeting Info.: Proceedings 11th British Weed Control

Conference.
PUB. COUNTRY: United Kingdom
DOCUMENT TYPE: Conference Article
LANGUAGE: English
ENTRY DATE: Entered STN: 19941101
Last Updated on STN: 19941101
ED Entered STN: 19941101
Last Updated on STN: 19941101
AB Eight **plant** growth regulators, including MH as a standard, were applied at 2, 4 and 8 kg/ha to the foliage or soil of pot grown A. repens at the 5- to 6-**leaf**, 1- to 2-tiller stage. **Shoot** number and weight, rhizome weight and node numbers were recorded 6 weeks after treatment. None of the compounds were more effective than MH as a herbicide, but the higher doses of chlorflurecol were almost as phytotoxic. The ability of 2-chlorethylphosphonic acid and chlorflurecol to **break dormancy** and alter the ratio of **shoots** to rhizomes indicated their potential as adjuvants to existing control measures. The performances of paraquat applied to foliage and pronamide applied to the soil were not enhanced by 2-chloroethylphosphonic acid and it was concluded that although **buds** were released from dormancy, they invariably developed into rhizomes increasing the **plants'** survival potential. Low rates of chlorflurecol which induces **buds** to develop into **leafy shoots** enhanced the performance of dalapon and paraquat under certain conditions, the relative times of application being important with dalapon and temperature with paraquat. Although herbicide activity **can** be enhanced with chlorflurecol, more reliable growth regulators are required for successful field application. From summary.

=> d l152 iall abeq tech abex 75-78
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, MEDLINE, EMBASE, BIOSIS, AGRICOLA, CABA, PASCAL, JICST-EPLUS, FSTA, CROPB, SCISEARCH, WPIX' - CONTINUE? (Y)/N:y

L152 ANSWER 75 OF 89 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 1994-151677 [18] WPIX
DOC. NO. CPI: C1994-069740
TITLE: **Breaking** the **rest** in deciduous fruit trees to improve bloom, bud break etc. - comprises application of alkoxylated amine or alkoxylated quat. **ammonium** cpd. and **rest-breaking** agent.
DERWENT CLASS: C03
INVENTOR(S): BUTSELAAR, R J; NORTH, M S
PATENT ASSIGNEE(S): (ALKU) AKZO NV
COUNTRY COUNT: 24
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
ZA 9303611	A	19940223	(199418)*		30	A01N000-00<--
EP 620970	A1	19941026	(199441)	EN		A01N033-12<--
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE						
WO 9423574	A1	19941027	(199442)	EN	34	A01N033-12<--
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE						
W: AU BR NZ US						
AU 9465692	A	19941108	(199507)			A01N033-12<--
BR 9406432	A	19960109	(199610)			A01N033-12<--

EP 701399	A1	19960320	(199616)# EN		A01N033-12<--
R: ES FR GR IT PT					
EP 701399	B1	19970122	(199709)# EN	30	A01N033-12<--
R: ES FR GR IT PT					
ES 2097045	T3	19970316	(199718)#		A01N033-12<--
NZ 265285	A	19970526	(199727)		A01N033-12<--
AU 678464	B	19970529	(199730)		A01N059-24<--
US 5693591	A	19971202	(199803)	10	A01N025-30<--
IL 109341	A	19980924	(199844)		A01N033-12<--
MX 194194	B	19991122	(200106)		A01N033-012<--

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE	
ZA 9303611	A	ZA 1993-3611	19930524	<--
EP 620970	A1	EP 1993-201138	19930420	<--
WO 9423574	A1	WO 1994-EP1180	19940414	<--
AU 9465692	A	AU 1994-65692	19940414	<--
BR 9406432	A	BR 1994-6432	19940414	<--
		WO 1994-EP1180	19940414	<--
EP 701399	A1	EP 1994-913606	19940414	<--
		WO 1994-EP1180	19940414	<--
EP 701399	B1	EP 1994-913606	19940414	<--
		WO 1994-EP1180	19940414	<--
ES 2097045	T3	EP 1994-913606	19940414	<--
NZ 265285	A	NZ 1994-265285	19940414	<--
		WO 1994-EP1180	19940414	<--
AU 678464	B	AU 1994-65692	19940414	<--
US 5693591	A	WO 1994-EP1180	19940414	<--
		US 1995-535280	19951227	<--
IL 109341	A	IL 1994-109341	19940418	<--
MX 194194	B	MX 1994-2885	19940420	<--

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9465692	A	Based on	WO 9423574
BR 9406432	A	Based on	WO 9423574
EP 701399	A1	Based on	WO 9423574
EP 701399	B1	Based on	WO 9423574
ES 2097045	T3	Based on	EP 701399
NZ 265285	A	Based on	WO 9423574
AU 678464	B	Previous Publ.	AU 9465692
		Based on	WO 9423574
US 5693591	A	Based on	WO 9423574

PRIORITY APPLN. INFO: **EP 1993-201138 19930420; EP 1994-913606 19940414**

REFERENCE PATENTS: DE 3150404; EP 232755; EP 257686; EP 272542; EP 463241; GB 1604321; GB 2257044; US 4525200; US 4556410

INT. PATENT CLASSIF.:

MAIN: A01N000-00; A01N025-30; A01N033-012; A01N033-12; A01N059-24

SECONDARY: A01N025-030; A01N033-008; A01N033-08; A01N033-22; A01N059-00

INDEX: A01N025:30, A01N033-08, A01N059:00, A01N059:24, A01N061:00; A01N025:30, A01N033-12, A01N059:00,

A01N059:24, A01N061:00; A01N025:30, A01N033-08, A01N059:00, A01N059:24, A01N061:00; A01N025:30, A01N033-12, A01N059:00, A01N059:24, A01N061:00; A01N025:30, A01N033-08, A01N059:00, A01N059:24, A01N061:00; A01N025:30, A01N033-12, A01N059:00, A01N059:24, A01N061:00; A01N025:30, A01N033-08, A01N059:00, A01N059:24, A01N061:00; A01N025:30, A01N033-12, A01N059:00, A01N059:24, A01N061:00

BASIC ABSTRACT:

ZA 9303611 A UPAB: 19940622

Breaking the **rest** in deciduous fruit trees comprises application before blossom or at least one **rest-breaking** agent are an alkoxylated amine of formula (I) or an alkoxylated quat. **ammonium** cpd. of formula (II). n = 1-50; A = alkylene; R = 8-22C alkyl or alkenyl or RN((AO)nR3)(CH2)x-; x = 1-6; R3 = H, 1-8C alkyl or alkenyl or at least 8C aryl; R1 = H, 1-22C alkyl or alkenyl or (AO)nR3; X = an anion; R5 = H, 1-4C alkyl or alkenyl or benzyl; or R5X = carboxymethyl as in betaines and oxygen as in amine oxides; R4 = 8-22C alkyl or alkenyl or a gp. of formula (i).

USE/ADVANTAGE - The process is useful for **rest-breaking** of deciduous fruit to produce improvements advancing the time of bloom, bud-break and/or leaf cover and fruit set. The present process enables the use of either milder **rest-breaking** agents or smaller quantities of harsher **rest-breaking** agents thus providing advantages in toxicity to man and insect populations. The process is especially useful in growing areas where the winter chilling of the fruit trees is insufficient to provide good outbreak.

Dwg.0/0

FILE SEGMENT: CPI

FIELD AVAILABILITY: AB; DCN

MANUAL CODES: CPI: C04-C03C; C10-A21; **C10-A22**; C10-B01B; C10-B03B; C14-U01C

ABEQ EP 701399 B UPAB: 19970228

A process for enhancing the **rest-breaking** in deciduous fruit trees which comprises the step of applying to at least one deciduous fruit tree before blossom, an effective amount of at least one **rest-breaking** agent and a compound selected from alkoxylated amines represented by the following general formula: R-N(R1)(AO)nR3, wherein n is an integer from 1 to 50, A represents an alkylene group and when n>1, each A may be the same or different alkylene groups, R is selected from straight or branched chain alkyl or alkenyl groups having 8 to 22 carbon atoms and groups represented by formula R2N(A1O)mR3(CH2)x- (i); wherein m is an integer from 1-50, A1 represents an alkylene group and when n>1, each A1 may be the same or different alkylene groups, x is an integer from 1-6, and R2 is independently selected from the same groups as R, R3 is selected from hydrogen, 1-8 carbon atom straight or branched chain alkyl and alkenyl groups and aryl groups having up to 8 carbon atoms; and R1 is selected from hydrogen, straight or branched chain alkyl and alkenyl groups having 1-22 carbon atoms, a group represented by the formula: (A2O)n'R3, wherein n' is an integer from 1 to 50 and A2 represents an alkylene group and when n'>1 each A2 may be the same or different alkylene groups; and alkoxylated quaternary **ammonium** compounds represented by the following formula (R4N+(AO)nR3)(R1)(R5))X- (ii); wherein n, A, R1 and R3 are as defined above, X is an anion, R5 is selected from hydrogen, straight or branched chain alkyl or alkenyl groups having 1 to 4 carbon atoms, and benzyl, or R5X- is carboxymethyl as in betaines, or oxygen as in amine

oxides; R4 is selected from straight or branched chain alkyl and alkenyl groups having 8-22 carbon atoms and groups represented by the formula R2N+(AlO)mR3(R5)((CH2)x) (iii), wherein A1, m, R2, R3, R4, R5 and x are as defined above.
Dwg.0/0

ABEQ US 5693591 A UPAB: 19980119

Breaking the **rest** in deciduous fruit trees comprises application before blossom or at least one **rest-breaking** agent are an alkoxylated amine of formula (I) or an alkoxylated quat. **ammonium** cpd. of formula (II). n = 1-50; A = alkylene; R = 8-22C alkyl or alkenyl or RN((AO)nR3)(CH2)x-; x = 1-6; R3 = H, 1-8C alkyl or alkenyl or at least 8C aryl; R1 = H, 1-22C alkyl or alkenyl or (AO)nR3; X = an anion; R5 = H, 1-4C alkyl or alkenyl or benzyl; or R5X = carboxymethyl as in betaines and oxygen as in amine oxides; R4 = 8-22C alkyl or alkenyl or a gp. of formula (i).

USE/ADVANTAGE - The process is useful for **rest-breaking** of deciduous fruit to produce improvements advancing the time of bloom, bud-break and/or leaf cover and fruit set. The present process enables the use of either milder **rest-breaking** agents or smaller quantities of harsher **rest-breaking** agents thus providing advantages in toxicity to man and insect populations. The process is esp. useful in growing areas where the winter chilling of the fruit trees is insufficient to provide good outbreak.
Dwg.0/0

L152 ANSWER 76 OF 89 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 1987-291534 [41] WPIX
DOC. NO. CPI: C1987-123798
TITLE: Synergistic plant growth regulator compsns. - containing ethylene response inducer especially ethephon and malonic acid derivative.
DERWENT CLASS: C03
INVENTOR(S): SEE, R M; COOKE, A R; FRITZ, C D; MANNING, D T; WHEELER, T N; MANNING, D; WHEELER, C D F T N
PATENT ASSIGNEE(S): (UNIC) UNION CARBIDE AGRIC PRODN; (RHON) RHONE POULENC INC; (UNIC) UNION CARBIDE AGRIC PROD CO INC; (RHON) RHONE-POULENC NEDER; (RHON) RHONE-POULENC CO INC AG; (RHON) RHONE POULENC NEDERLAND BV; (RHON) RHONE-POULENC NEDERLAND BV
COUNTRY COUNT: 33
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC	
WO 8705781	A	19871008	(198741)*	EN	234		<--
RW: BE CH DE DK FR GB IT LI MW NL SD SE							
W: AU BR FI HU JP KR NO SU							
AU 8772371	A	19871020	(198803)				<--
NO 8704929	A	19880215	(198812)				<--
EP 262209	A	19880406	(198814)	EN			<--
R: AT BE CH DE FR GB IT LI NL SE							
PT 84596	A	19880303	(198814)				<--
DK 8706235	A	19880126	(198822)				<--
BR 8707193	A	19880614	(198829)				<--
FI 8705279	A	19871130	(198835)				<--
JP 63503064	W	19881110	(198851)				<--
HU 46519	T	19881128	(198901)				<--
ZA 8702314	A	19881130	(198901)				<--
CN 87103565	A	19880302	(198916)				<--
ES 2004910	A	19890216	(198938)				<--

DD 273768	A	19891129 (199019)				<--
DE 3780897	G	19920910 (199144)				<--
CA 1291343	C	19911029 (199151)				<--
US 5123951	A	19920623 (199228)			73	A01N037-22<--
EP 262209	B1	19920805 (199232)		EN	43	A01N057-24<--
R: AT BE CH DE FR GB IT LI NL SE						
IL 82054	A	19921115 (199250)				A01N057-18<--
FI 90189	B	19930930 (199343)				A01N057-18<--
NO 176041	B	19941017 (199441)				A01N053-00<--
CN 1024544	C	19940518 (199529)				A01N053-00<--
CZ 8702195	A3	19950712 (199537)				A01N057-24<--
CZ 280917	B6	19960515 (199627)				A01N057-24<--
KR 9502854	B1	19950327 (199707)				A01N057-24<--
SK 278455	B6	19970604 (199733)				A01N057-24<--
SK 8702195	A3	19970604 (199733)				A01N057-24<--
RU 2088085	C1	19970827 (199819)			21	A01N037-22<--
JP 2749578	B2	19980513 (199824)			19	A01N057-18<--
PH 28930	A	19950613 (199902)				A01N037-00<--
DK 175682	B	20050117 (200508)				A01N057-24

APPLICATION DETAILS:

PATENT NO	KIND		APPLICATION	DATE	
WO 8705781	A		WO 1987-US648	19870330	<--
EP 262209	A		EP 1987-902947	19870330	<--
JP 63503064	W		JP 1987-502284	19870330	<--
ZA 8702314	A		ZA 1987-2314	19870330	<--
DE 3780897	G		DE 1987-3780897	19870330	<--
			EP 1987-902947	19870330	<--
			WO 1987-US648	19870330	<--
US 5123951	A	CIP of	US 1986-846392	19860331	<--
			US 1987-17150	19870304	<--
EP 262209	B1		EP 1987-902947	19870330	<--
			WO 1987-US648	19870330	<--
IL 82054	A		IL 1987-82054	19870330	<--
FI 90189	B		WO 1987-US648	19870330	<--
			FI 1987-5279	19871130	<--
NO 176041	B		WO 1987-US648	19870330	<--
			NO 1987-4929	19871126	<--
CN 1024544	C		CN 1987-103565	19870330	<--
CZ 8702195	A3		CS 1987-2195	19870330	<--
CZ 280917	B6		CS 1987-2195	19870330	<--
KR 9502854	B1		WO 1987-US648	19870330	<--
			KR 1987-701128	19871130	<--
SK 278455	B6		CS 1987-2195	19870330	<--
SK 8702195	A3		CS 1987-2195	19870330	<--
RU 2088085	C1		WO 1987-US648	19870330	<--
			SU 1987-4203732	19871127	<--
JP 2749578	B2		JP 1987-502284	19870330	<--
			WO 1987-US648	19870330	<--
PH 28930	A		PH 1987-35084	19870330	<--
DK 175682	B		WO 1987-US648	19870330	<--
			DK 1987-6235	19871127	<--

FILING DETAILS:

PATENT NO	KIND		PATENT NO
DE 3780897	G	Based on	EP 262209

		Based on	WO 8705781
EP 262209	B1	Based on	WO 8705781
FI 90189	B	Previous Publ.	FI 8705279
NO 176041	B	Previous Publ.	NO 8704929
CZ 280917	B6	Previous Publ.	CZ 8702195
SK 278455	B6	Previous Publ.	SK 8702195
JP 2749578	B2	Previous Publ.	JP 63503064
		Based on	WO 8705781
DK 175682	B	Previous Publ.	DK 8706235

PRIORITY APPLN. INFO: **US 1987-17150 19870304; US 1986-846392 19860331**
REFERENCE PATENTS: FR 2404397; No-SR.Pub; US 3072473
INT. PATENT CLASSIF.:
MAIN: A01N037-00; A01N037-22; A01N053-00; A01N057-18; A01N057-24
SECONDARY: A01N027-00; A01N031-00; A01N037-30; A01N041-04; A01N055-00; A01N057-04; A01N057-06; A01N057-08; A01N057-12; A01N057-20; A01N057-22; C07C103-36; C07C125-04; C07C233-00; C07C235-00
ADDITIONAL: C07C233-59; C07C235-82; C07C237-24; C07C251-66; C07C251-76; C07C255-14; C07C255-29; C07C255-49; C07C261-04; C07C271-12; C07C311-08; C07C311-24; C07C311-46; C07C317-18; C07C317-40; C07C323-00; C07C327-20; C07C329-06; C07C381-00; C07F009-38

BASIC ABSTRACT:
WO 8705781 A UPAB: 19971013
Plant growth regulator compsn. comprises (i) an ethylene response or ethylene-type response inducing agent and (ii) a malonic acid derivative of formula (I).

In (I), R1 and R2 are independently a substd. or unsubstd. carbocyclic or heterocyclic ring system. Y1 and Y2 are independently a substd. or unsubstd. heteroatom. Y3 and Y4 are independently hydrogen, or a substd. or unsubstd. heteroatom or substd. carbon atom, Y5 and Y6 are independently oxygen or sulphur.

USE/ADVANTAGE - Used for inducing plant growth regulating responses or ethylene responses or ethylene-type responses.

Dwg.0/0

FILE SEGMENT: CPI
FIELD AVAILABILITY: AB; DCN
MANUAL CODES: CPI: C05-B01G

ABEQ DE 3780897 G UPAB: 19930922
Plant growth regulator compsn. comprises (i) an ethylene response or ethylene-type response inducing agent and (ii) a malonic acid deriv. of formula (I).

In (I), R1 and R2 are independently a substd. or unsubstd. carbocyclic or heterocyclic ring system. Y1 and Y2 are independently a substd. or unsubstd. heteroatom. Y3 and Y4 are independently hydrogen, or a substd. or unsubstd. heteroatom or substd. carbon atom, Y5 and Y6 are independently oxygen or sulphur.

USE/ADVANTAGE - Used for inducing plant growth regulating responses or ethylene responses or ethylene-type responses.

ABEQ EP 262209 B UPAB: 19930922
A plant growth regulator composition comprising (i) an ethylene response or ethylene-type response inducing agent, comprising the 2-chloroethylene phosphonic acid, its derivatives and corresponding salts and esters, and (ii) a cylclopropyl malonanilate derivative compound having the formula (I) wherein: Z'11 is the same or different and is one or more hydrogen or halogen, or substituted or unsubstituted haloalkyl, polyhaloalkyl,

polyhaloalkoxy, alkyl, alkoxy, alkylthio, alkylsulphonyl, alkylsulphinyl, aryl, aryloxy, arylthio, arylsulphonyl, nitro, cyano, dialkoxyphosphinyl, acryl, aroyl, alkoxycarbonyl, alkoxycarbonylalkyl, acylamino, sulphonylamino, alkylsulphonylamino, acyloxy, alkenyl or -CH=CHCH=CH-; Y'6 is hydrogen or alkyl; Y'7, Y'8, Y'9 and Y'10 are independently hydrogen, halogen or alkyl; Y'41 is O, S or NH; R'10 is hydrogen, **ammonium** **alkylammonium**, **polyalkylammonium**, **hydroxyalkylammonium** poly(hydroxy)**ammonium**, an alkali metal or alkaline earth metal or substituted or unsubstituted alkyl, hydroxyalkyl, alkoxyalkyl, alkoxycarbonylalkyl, alkylaminoalkyl, dialkylaminoalkyl, aryl, mercaptoalkyl, alkylthioalkyl, arylthioalkyl, alkylsulphonylalkyl, alkylsulphinylalkyl, acylalkyl, aroylalkyl, dialkoxyphosphinylalkyl, diaryloxyphosphinylalkyl, hydroxyalkylthioalkyl, hydroxyalkylsulphonylalkyl, alkoxyalkylthioalkyl alkoxyalkylsulphonylalkyl, poly(oxyalkylene)alkyl, cyanoalkyl, nitroalkyl, alkylideneamino, carbamoylalkyl, alkylcarbamoylalkyl, dialkylcarbamoylalkyl, aminoalkyl, acylaminoalkyl, acyloxyalkyl, alkoxycarbonylaminoalkyl, cyanoaminoalkyl, carbamoyloxyalkyl, alkylcarbamoyloxyalkyl, dialkylcarbamoyloxyalkyl, alkoxycarbonyloxyalkyl, alkoxycarbonylthioalkyl, alkylcarbamoyloxyalkyl, dialkylcarbamoyl oxycarbonylaminoalkyl, cyanoaminoalkyl, carbamoyloxyalkyl, alkylcarbamoyloxyalkyl, dialkylcarbamoyloxyalkyl, alkoxycarbonyloxyalkyl, alkoxycarbonylthioalkyl, aminosulphonylalkyl, alkylaminosulphonylalkyl or dialkylamino sulphonylalkyl; in which the amount of compound (ii) used with agent (i) results in a mixture having a greater plant growth regulating effect than the sum total plant growth regulating effect of agent (i) and compound (ii) used alone.

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ABEQ US 5123951 A UPAB: 19930922

Plant growth regulating compsn. comprise: (a) 2-chloroethyl phosphonic acid and (b) a malonic acid deriv. of formula (I).

Z11 = 1 or more H, halogen, haloalkyl, polyhaloalkyl, polyhaloalkoxy, alkyl, alkoxy, alkylthio, alkylsulphonyl, alkylsulphinyl, aryl, aryloxy, arylthio, arylsulphonyl, NO2, CN, dialkoxyphosphinyl, acyl, aroyl, alkoxycarbonyl, alkoxycarbonylalkyl, acylamino, sulphonylamino, alkylsulphonylamino, acyloxy, alkenyl or CH=CHCH=CH. The alkyl, alkoxy, acyl and alkenyl gps. are all lower and the aryl and aroyl gps. are hydrocarbyl. Y6 = H or lower alkyl. Y7, R8, Y9 and Y10 = H, halogen, or lower alkyl. R10 = R11Y41. R11 = H, a derivative salt or opt. substd. lower alkyl. Y41 = O, S, NH or N(lower alkyl).

USE - In increasing yield, enhancement of auxin activity, inhibition of terminal growth, control of apical dominance, increase of branching, increase of tillering, abscission of foliage flowers or fruit, hastening ripening, and colour promotion in fruit, increasing flowering and fruiting, abortion or inhibition of flowering and seed development, prevention of lodging, stimulation of seed germination and **breaking** of **dormancy**, promoting resistance to freeze injury, inducing hormone or epinasty effects or defoliation and regrowth inhibition.

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L152 ANSWER 77 OF 89 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 1987-057697 [09] WPIX
DOC. NO. NON-CPI: N1987-043702
DOC. NO. CPI: C1987-024013
TITLE: Determn. of cyanamide in plant material - by extraction, reaction with 1,2-naphthoquinone-4-sulphonate, then reverse phase chromatography of 4-cyan imido cpd. formed.
DERWENT CLASS: E16 J04 P13 S03
INVENTOR(S): RUST, U

PATENT ASSIGNEE(S): (SUDD) SKW TROSTBERG AG
COUNTRY COUNT: 6
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC	
DE 3625205	A	19870226	(198709)*		8		<--
AU 8661160	A	19870226	(198713)				<--
FR 2586480	A	19870227	(198714)				<--
JP 62098239	A	19870507	(198724)				<--
US 4692415	A	19870908	(198738)		8		<--
DE 3625205	C	19900412	(199015)				<--
CA 1299474	C	19920428	(199222)			G01N033-50	<--

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE	
DE 3625205	A	DE 1986-3625205	19860725	<--
FR 2586480	A	FR 1986-11995	19860822	<--
US 4692415	A	US 1986-896950	19860814	<--
CA 1299474	C	CA 1986-516549	19860821	<--

PRIORITY APPLN. INFO: **DE 1985-3530013 19850822; DE 1986-3625205 19860725**
INT. PATENT CLASSIF.:
MAIN: G01N033-50
SECONDARY: A01N059-24; G01N030-02; G01N030-72
BASIC ABSTRACT:
DE 3625205 A UPAB: 19930922
Cyanamide (I) is assayed in plants (or plant parts) by (1) extracting (I); (2) reacting (I) in aqueous alkaline medium with 1,2-naphthoquinone-4-sulphonate (II) to form 4-cyanimido-1,2-naphthoquinone (III); (3) separating (III) by reverse-phase high-pressure liquid chromatography (r.p.-h.p.l.c.) and (4) measuring absorbence at 485 or 272 nm. Pref. (I) is extracted, from aqueous solution, with ethyl acetate or Et2O, and is isolated on a solid adsorbent, pref. diatomaceous earth.

(I) is reacted with (II) at pH 8-12 (pref. 9.5-10.5) and at 10-150 (pref. 80-120) deg.C. At least a stoichiometric amount, pref. 10-1000 times excess, of (II) is used and (III) is subjected to h.p.l.c. in the form of a **tetraalkylammonium** salt, especially formed by reacting with Bu4N hydrogensulphate or **methyltrioctylammonium** chloride (dissolved in dichloromethane being used to extract (III) from the aqueous alkaline reaction mixture).

USE/ADVANTAGE - The method is especially applied to fruits ((I) is used to **break** bud **dormancy** in vines, etc.). It is relatively simple, very sensitive and specific, and can detect (I) down to 0.01-0.05 ppm, even in presence of amino acids or other cpds. which interfere in the usual analytical procedures.

0/1
FILE SEGMENT: CPI EPI GMPI
FIELD AVAILABILITY: AB; DCN
MANUAL CODES: CPI: E10-A06; E11-Q03C; E32-B; J04-B01C
EPI: S03-E09C; S03-E14H
ABEQ DE 3625205 C UPAB: 19930922
Determination of cyanamide in plant tissues comprises extraction of the disintegrated material with water; extraction of the aq soln with a water-immiscible organic solvent, eg Et0Ac or Et20; sepn on a diatomaceous

earth elution with EtOAc; the extract is evapd and diluted with water, then reacted with 1,2naphthoquinone-4-sulphonate in the presence of Na2C03 at 100 C for 5 min; and the resulting soln of 4-cyanimido-1,2-naphthoquinone is subjected to HPLC, detecting the eluate fractions spectrophotometrically, (characteristic peaks at 485 or 272 nm).

USE - the process is applicable to the detection of traces of cyanamide in grapes and other fruit.

ABEQ US 4692415 A UPAB: 19930922

Determn. of cyanamide in plants or plant parts comprises (1) extracting cyanamide from the plant (part), (2) reacting it in aq. alkaline medium with 1,2-naphthoquinone- 4-sulphonate, to give 4-cyanimido-1,2-naphthoquinone (I), (3) sepg. (I) by high performance liq. chromatography on a reverse phase and (4) determining (I) spectrophotometrically at 485 or 272 nm. wavelength.

Suitably, an aq. plant extract is produced and the cyanamide is extd. therefrom by liq.-liq. extn. pref. with the help of a water insoluble organic solvent, e.g. ethyl acetate or diethyl ether. Pref. step (2) takes place at pH 8-12 and 80-120 deg.C.

ADVANTAGE - Cyanamide can be detected extremely specifically and sensitively also in the presence of interfering substances, e.g. amino acids.

L152 ANSWER 78 OF 89 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 1981-29548D [17] WPIX
TITLE: Enhancing reproductive development of plants - by application of aqueous **choline** salt to plants.
DERWENT CLASS: C03
INVENTOR(S): KESSLER, B
PATENT ASSIGNEE(S): (ISRA) ISRAEL MIN AGRIC
COUNTRY COUNT: 4
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC	
GB 2059412	A	19810423	(198117)*				<--
ZA 8005258	A	19810708	(198139)				<--
US 4309205	A	19820105	(198204)				<--
IL 58112	A	19811231	(198211)				<--
GB 2059412	B	19840404	(198414)				<--

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE	
GB 2059412	A	GB 1980-27750	19800827	<--

PRIORITY APPLN. INFO: **IL 1979-58112 19790827**
INT. PATENT CLASSIF.: A01N033-04; C05G003-00; C07C091-26
BASIC ABSTRACT:

GB 2059412 A UPAB: 19930915

Reproductive development of plants growing on soil is enhanced by application of an aqueous solution of a **choline** salt (I).

Quantity and/or quality of flowers and fruits on treated plants is increased or improved. Fruit size and total yield are increased; regulation of the relative duration of cell division and enlargement phases of fruit development (influencing fruit texture and storage qualities) is achieved; colour intensity of coloured fruit is increased; pitting of apples etc. is decreased; **break** of **dormancy**

is improved; and burn of fruit by sun is prevented. Application is at up to 500 kg/ha for root application or up to 30kg/kg for foliar application.
FILE SEGMENT: CPI
FIELD AVAILABILITY: AB
MANUAL CODES: CPI: **C10-A22**; C12-P01; C12-P04
ABEQ GB 2059412 B UPAB: 19930915
A method for enhancing the reproductive development of plants growing on soil, characterised by applying to the plants an effective amt. of at least one non-toxic **choline** salt in aqueous medium.

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YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, MEDLINE, EMBASE, BIOSIS, AGRICOLA, CABA, PASCAL, JICST-EPLUS, FSTA, CROPB, SCISEARCH, WPIX' - CONTINUE? (Y)/N:y

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L152 ANSWER 79 OF 89 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 1998-0438746 PASCAL
COPYRIGHT NOTICE: Copyright .COPYRGT. 1998 INIST-CNRS. All rights reserved.
TITLE (IN ENGLISH): A smoke-induced alteration of the sub-testa cuticle in seeds of the post-fire recruiter, Emmenanthe penduliflora Benth. (Hydrophyllaceae)
AUTHOR: EGERTON-WARBURTON L. M.
CORPORATE SOURCE: Department of Botany and Plant Sciences, The University of California, Riverside, CA 92521-0124, United States
SOURCE: Journal of Experimental Botany, **(1998)**, 49(325), 1317-1327, 44 refs.
ISSN: 0022-0957 CODEN: JEBOA6
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: United Kingdom
LANGUAGE: English
AVAILABILITY: INIST-6923, 354000072684290070
UP 20001101
AB Emmenanthe penduliflora is an obligate fire-recruiter and demonstrates a prolonged seed dormancy followed by germination closely cued to the immediate post-fire environment. This study investigated, at the ultrastructure level, the causal factor(s) associated with seed dormancy and the stimulation of germination after exposure to smoke. The seed coat was responsible for the proximal regulation of dormancy-a waxy cuticular layer situated between the testa and endosperm was the primary barrier to the diffusion of water and small diameter solutes. The sub-testa cuticle in dormant seeds was partially permeable, as indicated by the presence of permeate channels. A short exposure to dry smoke (3 min) promoted a significant increase in seed germination (dormant 8±0.3%; smoke-treated 79±3%). Exposure to smoke also resulted in two major changes to the morphology of the seed. First, smoke treatment produced an intense chemical scarification at the seed surface; the external cuticle was plasticized to form numerous small spheres on the seed surface.

Second, smoke significantly altered the permeability of the internal (sub-testa) cuticle. A significant increase in both the number and size of permeate channels in the sub-testa cuticle indicated that these modifications were directly associated with the **breaking** of seed **dormancy**. The observed changes at both the internal (sub-testa) and external cuticles are consistent with the hypothesis that volatiles in smoke exert a **surfactant**-like reaction to **break** seed **dormancy** in E. penduliflora.

SO Journal of Experimental Botany, **(1998)**, 49(325), 1317-1327, 44 refs.
ISSN: 0022-0957 CODEN: JEBOA6

AB Emmenanthe penduliflora is an obligate fire-recruiter and demonstrates a prolonged seed dormancy followed by germination closely cued to the immediate post-fire environment. This study investigated, at the ultrastructure level, the causal factor(s) associated with seed dormancy and the stimulation of germination after exposure to smoke. The seed coat was responsible for the proximal regulation of dormancy-a waxy cuticular layer situated between the testa and endosperm was the primary barrier to the diffusion of water and small diameter solutes. The sub-testa cuticle in dormant seeds was partially permeable, as indicated by the presence of permeate channels. A short exposure to dry smoke (3 min) promoted a significant increase in seed germination (dormant 8±0.3%; smoke-treated 79±3%). Exposure to smoke also resulted in two major changes to the morphology of the seed. First, smoke treatment produced an intense chemical scarification at the seed surface; the external cuticle was plasticized to form numerous small spheres on the seed surface. Second, smoke significantly altered the permeability of the internal (sub-testa) cuticle. A significant increase in both the number and size of permeate channels in the sub-testa cuticle indicated that these modifications were directly associated with the **breaking** of seed **dormancy**. The observed changes at both the internal (sub-testa) and external cuticles are consistent with the hypothesis that volatiles in smoke exert a **surfactant**-like reaction to **break** seed **dormancy** in E. penduliflora.

CT Fumes; **Dormancy breaking**; Germination; Canopy fire; Ultrastructure; Tegument; Plant wax; Cuticle; Morphology

L152 ANSWER 80 OF 89 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 1995-0233480 PASCAL
COPYRIGHT NOTICE: Copyright .COPYRGT. 1995 INIST-CNRS. All rights reserved.
TITLE (IN ENGLISH): Influence of gibberellic acid and potassium **nitrate** on seed germination of Nothofagus betuloides (Mirb.) Oerst
TITLE (IN SPANISH): Nota sobre la influencia del acido giberelico y del **nitrato** de potasio **en** la germinacion de semillas de Nothofagus betuloides (Mirb.) Oerst
AUTHOR: MARTINEZ PASTUR C.; ARENA M. E.; FERNANDEZ C.
CORPORATE SOURCE: CONICET-CADIC-PROVEG, Ushuaia Prov. Tierra del Fuego, Argentina
SOURCE: Investigacion agraria. Sistemas y recursos forestales, **(1994)**, 3(1), 83-89, 15 refs.
ISSN: 1131-7965
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: Spain
LANGUAGE: Spanish
SUMMARY LANGUAGE: English
AVAILABILITY: INIST-6997H, 354000059910970080

UP 20001031
TIEN Influence of gibberellic acid and potassium **nitrate** on seed germination of Nothofagus betuloides (Mirb.) Oerst
TIES Nota sobre la influencia del acido giberelico y del **nitrato** de potasio **en** la germinacion de semillas de Nothofagus betuloides (Mirb.) Oerst
SO Investigacion agraria. Sistemas y recursos forestales, **(1994)**, 3(1), 83-89, 15 refs.
ISSN: 1131-7965
CT Seed; Pretreatment; Germinability; **Dormancy breaking**; Germination; Gibberellic acid; Growth regulator treatment; Potassium **Nitrates**; Tierra del Fuego
CTFR Semence; Pretraitement; Pouvoir germinatif; Levee dormance; Germination; Gibberellique acide; Traitement substance croissance; Potassium **Nitrate**; Terre de Feu; Nothofagus betuloides
CTES Semilla; Pretratamiento; Poder germinativo; Ruptura dormicion; Germinacion; Giberelico acido; Tratamiento substancia crecimiento; Potasio **Nitrato**; Tierra del Fuego

L152 ANSWER 81 OF 89 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 1992-0538817 PASCAL
TITLE (IN ENGLISH): Effect of light and its interaction with **nitrate** and **ammonium** ions in seed germination of Caesulia axillaris
AUTHOR: SINGH B.; AMRITPHALE D.
CORPORATE SOURCE: Vikram univ., school studies botany, Ujjain 456 010, India
SOURCE: Physiologia plantarum, **(1992)**, 85(1), 43-48, refs. 1/2 p.
ISSN: 0031-9317 CODEN: PHPLAI
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: Denmark
LANGUAGE: English
AVAILABILITY: INIST-2583, 354000028081530070
UP 20001027
TIEN Effect of light and its interaction with **nitrate** and **ammonium** ions in seed germination of Caesulia axillaris
SO Physiologia plantarum, **(1992)**, 85(1), 43-48, refs. 1/2 p.
ISSN: 0031-9317 CODEN: PHPLAI
CT Germination; **Dormancy breaking**; Light effect; Red light; Phytochrome; **Ammonium**; **Nitrates**
CTFR Germination; Levee dormance; Facteur photique; Lumiere rouge; Phytochrome; **Ammonium**; **Nitrate**
CTES Germinacion; Ruptura dormicion; Factor fotico; Luz roja; Fitocromo; Amonio; **Nitrato**

L152 ANSWER 82 OF 89 JICST-EPlus COPYRIGHT 2005 JST on STN
ACCESSION NUMBER: 970929827 JICST-EPlus
TITLE: Development of **breaking-dormancy** method in super early warming cultivation of deciduous leaf fruit tree (grapes and Pyrus, etc.). Elucidation of **breaking-dormancy** method in Japanese pears (slash test). (Saga Prefectural Fruit Tree Exp. Stn. S).
AUTHOR: FUKUDA TADASHI; FUKUDA HIROYUKI; OTA MASATAKA
CORPORATE SOURCE: Saga Prefect. Fruit Tree Exp. Stn.
SOURCE: Sagaken Kaju Shikenjo Gyomu Nenpo, (1997) vol. 1996, pp. 183-184. Journal Code: J0842A (Tbl. 2)

PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Short Communication
LANGUAGE: Japanese
STATUS: New
TI Development of **breaking-dormancy** method in super early warming cultivation of deciduous leaf fruit tree (grapes and Pyrus, etc.). Elucidation of **breaking-dormancy** method in Japanese pears (slash test). (Saga Prefectural Fruit Tree Exp. Stn. S).
SO Sagaken Kaju Shikenjo Gyomu Nenpo, (1997) vol. 1996, pp. 183-184. Journal Code: J0842A (Tbl. 2)
CT Pyrus pyrifolia; dormancy(physiology); training(plant); early season culture; germination promoter; calcium cyanamide; **ammonium nitrate**; branch; fruit tree; amine; nitrogen heterocyclic compound; aromatic compound; plant growth promoter
BT edible fruit; garden crop; crop(agriculture); agricultural food; food; Pyrus; Rosaceae; Rosales; Choripetalae; Dicotyledoneae; Angiospermae; Phanerogamae; plant(organism); biological rhythm; pruning(fruit tree); cultivation management; management; cultivation; plant growth regulator; plant regulator; nitrogen fertilizer; fertilizer; **ammonium** compound; onium compound; hydrogen compound; nitrogen compound; nitrogen group element compound; **nitrate**(salt); nitrogen oxoate; oxoate; oxygen compound; oxygen group element compound; stem(plant); shoot(plant); plant organ; tree(plant); heterocyclic compound

L152 ANSWER 83 OF 89 JICST-EPlus COPYRIGHT 2005 JST on STN
ACCESSION NUMBER: 970130454 JICST-EPlus
TITLE: Establishment of **dormancy breaking** method for super early warming cultivation of deciduous fruit tree (grape, pear, etc.). Elucidation of **dormancy breaking** method for pear (slash test). (Saga Prefectural Fruit Tree Exp. Stn. S)
AUTHOR: FUKUDA TADASHI; FUKUDA HIROYUKI; OTA MASATAKA
CORPORATE SOURCE: Saga Prefect. Fruit Tree Exp. Stn.
SOURCE: Sagaken Kaju Shikenjo Gyomu Nenpo, (1996) vol. 1995, pp. 119-120. Journal Code: J0842A (Tbl. 2)
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Commentary
LANGUAGE: Japanese
STATUS: New
TI Establishment of **dormancy breaking** method for super early warming cultivation of deciduous fruit tree (grape, pear, etc.). Elucidation of **dormancy breaking** method for pear (slash test). (Saga Prefectural Fruit Tree Exp. Stn. S)
SO Sagaken Kaju Shikenjo Gyomu Nenpo, (1996) vol. 1995, pp. 119-120. Journal Code: J0842A (Tbl. 2)
CT Pyrus pyrifolia; dormancy(physiology); cultivation under structure; forcing culture; low temperature; calcium cyanamide; **ammonium nitrate**; plant growth regulator; damage and injury; bud
BT edible fruit; garden crop; crop(agriculture); agricultural food; food; Pyrus; Rosaceae; Rosales; Choripetalae; Dicotyledoneae; Angiospermae; Phanerogamae; plant(organism); biological rhythm; cultivation; season-off culture; temperature; nitrogen fertilizer; fertilizer; **ammonium** compound; onium compound; hydrogen compound; nitrogen compound; nitrogen group element compound; **nitrate**(salt); nitrogen oxoate; oxoate; oxygen compound; oxygen group element compound; plant regulator; plant organ

L152 ANSWER 84 OF 89 JICST-EPlus COPYRIGHT 2005 JST on STN
ACCESSION NUMBER: 930249272 JICST-EPlus

TITLE: Nitrogen Metabolism in the Grape Buds Treated with **Ammonium Nitrate** and Calcium Cyanamide.
AUTHOR: MOCHIZUKI TOORU
YONEYAMA TADAKATSU
CORPORATE SOURCE: Yamanashi Prefect. Fruit Tree Exp. Stn.
National Inst. of Agrobiological Resources
SOURCE: Nippon Dojo Hiryogaku Zasshi (Japanese Journal of Soil Science and Plant Nutrition), (1993) vol. 64, no. 1, pp. 62-70. Journal Code: G0156A (Fig. 11, Tbl. 3, Ref. 20)
CODEN: NIDHAX; ISSN: 0029-0610
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article
LANGUAGE: Japanese
STATUS: New

AB Treatment of buds of greenhouse-grown grapevines with **ammonium nitrate** on December or January or with calcium cyanamide on December hastened considerably the **breaking** of **dormancy** (sprouting). Using NH415NO3 or CaC15N2, the incorporation of 15N into the buds was investigated. Further, the changes of amino acid concentrations in the buds treated with these chemicals were analyzed. NO3-15N and CN2-15N used on December were actively incorporated into amino acid and protein fractions. The treatment with NH4NO3 increased the concentrations of asparagine, glutamic acid, glutamine, histidine and arginine in the buds. All amino acids, except aspartic acid were not increased during 8days after treatment with CaCN2 but thereafter, most of them were observed to increase. NO3-15N was transported to the newly grown buds but the transport of CN2-15N to this organ was small. NO3-15N used on January was also actively incorporated into the buds and the treatment with NH4NO3 greatly increased the concentrations of glutamine and alanine. The hastening of sprouting by 3 to 4days due to treatment with **ammonium nitrate** was also observed in outdoor-grown grapevines, but the transport of NO3-15N to the newly formed leaves was small. (author abst.)

TI Nitrogen Metabolism in the Grape Buds Treated with **Ammonium Nitrate** and Calcium Cyanamide.

SO Nippon Dojo Hiryogaku Zasshi (Japanese Journal of Soil Science and Plant Nutrition), (1993) vol. 64, no. 1, pp. 62-70. Journal Code: G0156A (Fig. 11, Tbl. 3, Ref. 20)
CODEN: NIDHAX; ISSN: 0029-0610

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CT grape; germination; growth promotion; **ammonium nitrate** ; calcium cyanamide; nitrogen metabolism; painting and coating; branch;

bud; nitrogen 15; labeled compound; tracer method; nutrient absorption; amino acid; aliphatic amine; aliphatic carboxylic acid; carboxamide; ester

BT edible fruit; garden crop; crop(agriculture); agricultural food; food; Vitaceae; Choripetalae; Dicotyledoneae; Angiospermae; Phanerogamae; plant(organism); developmental physiology; growth regulation; adjustment; promotion; **ammonium** compound; onium compound; hydrogen compound; nitrogen compound; nitrogen group element compound; **nitrate** (salt); nitrogen oxoate; oxoate; oxygen compound; oxygen group element compound; nitrogen fertilizer; fertilizer; metabolism; operation(processing); stem(plant); shoot(plant); plant organ; stable isotope; isotope; nitrogen isotope; light nucleus; atomic nucleus; compound(chemical); plant physiology; biological absorption; absorption; amine; carboxylic acid

L152 ANSWER 85 OF 89 JICST-EPlus COPYRIGHT 2005 JST on STN
ACCESSION NUMBER: 880022678 JICST-EPlus
TITLE: Absorption and translocation of 6-benzylamino purine in satsuma (Citrus unshiu Marc.) trees.
AUTHOR: ZHU X R; MATSUMOTO K
CORPORATE SOURCE: Ehime Univ., Matsuyama, JPN
SOURCE: Engei Gakkai Zasshi (Journal of the Japanese Society for Horticaltural Science), (1987) vol. 56, no. 2, pp. 159-165. Journal Code: F0626A (Fig. 3, Tbl. 2, Ref. 12)
CODEN: EGKZA9; ISSN: 0013-7626
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article
LANGUAGE: English
STATUS: New

AB Absorption of 6-benzylamino purine (BA) combined with (8-14C) BA by abaxial and adaxial surfaces of satsuma leaves as well as the effects of the **surfactant** Tween 20 on BA absorption were studied. In addition, the movement of BA combined with 14C-BA in a one-year-old shoot was examined after application to the surface of buds and leaves with cotton swabs and to the vascular tissues of the shoot by the cotton thread method. Absorption of 14C-BA began immediately after treatment and reached a maximum level in about 8 hours. Absorption of 14C-BA by the abaxial leaf surface seemed faster than adaxial absorption, although similar time course trends of absorption were shown in both abaxial and adaxial applications. Most of the BA applied seemed to be taken in by penetration, perhaps through the ectodesmata, but also slightly through stomatal pores. Even under low temperature conditions, BA was absorbed either by quiescent axillary buds or their subtending leaves, resulting in the **break** of bud **dormancy.** Inclusion of Tween 20 in the treating solutions clearly enhanced the absorption of BA by the epidermal tissues. An optimum concentration of Tween 20 for obtaining maximum BA absorption was about 0.1%. The 14C-BA applied directly to the vascular system by the cotton thread method was translocated mostly toward nearby axillary buds and their subtending leaves, although the amount of 14C recovered from each location was quite limited. Dormancy-release effects of BA applied directly to the bud surface were restricted to the treated bud and not transmitted to untreated neighboring buds.(author abst.)

SO Engei Gakkai Zasshi (Journal of the Japanese Society for Horticaltural Science), (1987) vol. 56, no. 2, pp. 159-165. Journal Code: F0626A (Fig. 3, Tbl. 2, Ref. 12)
CODEN: EGKZA9; ISSN: 0013-7626

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CT mandarin orange; biological absorption; translocation(plant); carbon 14; tracer method; **surfactant**; bud; dormancy(physiology); leaf; amine; nitrogen heterocyclic compound; aromatic compound; plant growth promoter

L152 ANSWER 86 OF 89 FSTA COPYRIGHT 2005 IFIS on STN
ACCESSION NUMBER: 1991(03):J0166 FSTA
TITLE: Effects of nitrogen fertilization on stored cabbage. I. Development of physiological disorders on tolerant and susceptible cultivars.
AUTHOR: Berard, L. S.
CORPORATE SOURCE: Agric. Canada Res. Sta., St-Jean-sur-Richelieu, Que. J3B 6Z8, Canada
SOURCE: Journal of Horticultural Science, (1990) 65 (3) 289-296, 20 ref.
ISSN: 0022-1589
DOCUMENT TYPE: Journal
LANGUAGE: English
UP 20020111

AB The development of 3 physiological disorders of stored cabbage was studied in 1984-1985 and 1985-1986 on the tolerant cv. Hidena and susceptible cv. Safekeeper, after 126, 180 or 310 days of storage at 1°C and 95% RH. Cabbages were from field plots where treatments of 0, 90, 180 or 270 kg N ha.sup.-.sup.1 of calcium **nitrate**, **ammonium** **nitrate** or **ammonium** sulphate were applied before transplanting. Yield, head weight and head density were measured at harvest and weight losses at storage removal. The severity of black midrib increased linearly with N rates, in 1984-1985 the disorder occurred in storage. On the susceptible cv. Safekeeper, grey speck disease and vein streaking were generally severe even at low N rates; these 2 disorders also developed less rapidly than black midrib up to the maximum severity in storage on heads treated with high N. High N in general, and calcium **nitrate** more particularly, reduced maturity at harvest and promoted the development of grey speck disease, rooting and the **break** of **dormancy** after 310 days of storage. Fertilization with **nitrates** compared with **ammonium** sulphate occasionally increased vein streaking. Application of N fertilizers in excess of 180 kg N ha.sup.-.sup.1 m must be avoided, **nitrates** should be used carefully, and a tolerant cv. planted, to ensure high quality cabbage for long-term storage.

SO Journal of Horticultural Science, (**1990**), 65 (3) 289-296, 20 ref.
ISSN: 0022-1589

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L152 ANSWER 87 OF 89 CROPB COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 76-84318 P G
TITLE: **BREAKING** BUD **DORMANCY** IN TEA CRABAPPLE /MALUS HUPEHENSIS /PAMP./ REHD./ WITH CYTOKININS.
AUTHOR: BROOME O C; ZIMMERMAN R H
LOCATION: BELTSVILLE,MD.,USA.
SOURCE: J.AM.SOC.HORT.SCI. (101, NO.1, 28-30, **1976**)
TI **BREAKING** BUD **DORMANCY** IN TEA CRABAPPLE /MALUS HUPEHENSIS /PAMP./ REHD./ WITH CYTOKININS.
SO J.AM.SOC.HORT.SCI. (101, NO.1, 28-30, **1976**)
IT GROWTH-INDUCTOR PURINE BENZYLADENINE VERDAN ISOPENTENYLADENOSINE ISOPENTENYLADENINE SINGLY CF. COMB. & ADDITIVE DIFF.**SURFACTANT** CF. SOLVENT DMSO INDUCTION SPROUTING OF DORMANT-BUD TEA-CRABAPPLE

L152 ANSWER 88 OF 89 CROPB COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 72-80770 H G P
TITLE: IMPROVED WEED CONTROL TECHNIQUES EMPLOYING LOWER DOSES CAN REDUCE HERBICIDE RESIDUES.
AUTHOR: CASELEY J C
LOCATION: YARNTON,U.K.
SOURCE: PROC.BRIT.WEED CONTROL CONF. (VOL.3, 1071-78, **1970**)
SO PROC.BRIT.WEED CONTROL CONF. (VOL.3, 1071-78, **1970**)
IT IMPROVED-APPLICATION-TECHNIQUE CF. DIFF.ADDITIVE GROWTH-REGULATOR **DORMANCY-BREAKER** E.G. OLEFIN ETHYLENE FERTILIZER N-ACID **AMMONIUM-NITRATE** ALSO CLIMATE INFLUENCE ON UPTAKE HERBICIDE-ACT. E.G. PHENOXYFATTY-ACID 2,4,5-T AMINOTRIAZOLE AGROPYRON REPENS ETC.

L152 ANSWER 89 OF 89 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 1998:223994 SCISEARCH
THE GENUINE ARTICLE: ZC181
TITLE: Mechanism of smoke-induced seed germination in a post-fire chaparral annual
AUTHOR: Keeley J E (Reprint); Fotheringham C J
CORPORATE SOURCE: Natl Sci Fdn, Div Environm Biol, 4201 Wilson Blvd, Arlington, VA 22230 USA (Reprint); Occidental Coll, Dept Biol, Los Angeles, CA 90041 USA
COUNTRY OF AUTHOR: USA

SOURCE: JOURNAL OF ECOLOGY, (**FEB 1998**) Vol. 86, No. 1, pp. 27-36.
ISSN: 0022-0477.
PUBLISHER: BLACKWELL SCIENCE LTD, P O BOX 88, OSNEY MEAD, OXFORD OX2 0NE, OXON, ENGLAND.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 43
ENTRY DATE: Entered STN: 1998
Last Updated on STN: 1998
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

ED Entered STN: 1998
Last Updated on STN: 1998

AB 1 Smoke-stimulated germination in the post-fire flora of California chaparral does not appear to be triggered by **nitrate.** Application of freshly prepared unbuffered KNO3 solutions (pH c. 6.2) failed to enhance germination of five populations of Emmenanthe penduliflora or one Phacelia grandiflora population, regardless of light or stratification conditions.

2 KNO3 buffered at acidic pH (or unbuffered solutions equilibrated with atmospheric CO2) did induce germination, but KNO3 solutions at pH 7 failed to induce germination. Induction of germination is therefore not due to the **nitrate** ion pet se, but rather to high [H+], although buffered controls gave weak germination at low pH, suggesting a role for H+ plus **nitrate.** However, other anions such as sulphate were equally as effective as **nitrate** at **breaking dormancy.**

3 The germination response to KNO3 was affected by the type bf filter paper used and this may be linked to differences in pH.

4 NO2, at concentrations present in biomass smoke, was highly effective at inducing germination, and other oxidizing agents also induced germination.

5 Several growth regulators, including nitrite and gibberellin, were stimulatory only at acidic pH, but KCN was stimulatory across a broad pH range.

6 Germination decreased at smoke exposures longer than a few minutes. Also, smoked water samples effective at **breaking dormancy** were acidic and were less effective when buffered to pH >7.

7 Physical scarification of the seed coat induced germination but the effect was not due to penetration of a water barrier, or to enhanced oxygen uptake or to wound responses such as CO2 or ethylene production.

8 Different effects of the gibberellin inhibitor CCC (**chlorocholine** chloride) suggested that the mechanisms of scarification-induced and smoke-induced germination may differ.

9 We conclude that either oxidizing gases in smoke and/or acids generated on burnt sites play a role in germination of post-fire annuals in chaparral.

SO JOURNAL OF ECOLOGY, (**FEB 1998**) Vol. 86, No. 1, pp. 27-36.
ISSN: 0022-0477.

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ST Author Keywords: acids; **ammonium**; Emmenanthe penduliflora; germination; **nitrate**; nitrite; nitrogen dioxide; Phacelia grandiflora; scarification; seeds; smoke

STP KeyWords Plus (R): AVENA-FATUA; RED RICE; NITROGENOUS COMPOUNDS; PHYSIOLOGICAL-BASIS; ORGANIC-ACIDS; CHARRED WOOD; DORMANCY; PH; BREAKING; **NITRATE**

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YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, MEDLINE, BIOSIS, CABA, PASCAL, WPIX' -
CONTINUE? (Y)/N:y

L153 ANSWER 1 OF 33 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1
ACCESSION NUMBER: 2003:833372 HCAPLUS
DOCUMENT NUMBER: 140:106899
TITLE: Alternative **rest-breaking** agents evaluated on 'Golden Delicious' apple trees
AUTHOR(S): North, M.
CORPORATE SOURCE: The Fruit, Vine and Wine Research Institute of the Agricultural Research Council, ARC Infruitec-Nietvoorbij, Stellenbosch, S. Afr.
SOURCE: South African Journal of Plant and Soil, (2003), 20(2), 59-63
CODEN: SAJSEV; ISSN: 0257-1862
PUBLISHER: Forum Press International
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 24 Oct 2003
AB To reduce the growth abnormalities associated with insufficient winter chilling, most of the apple (Malus domestica Borkh.) trees growing in the Western Cape of South Africa receive an annual application of a chemical **rest-breaking** agent (RBA) at the end of winter. Studies were initiated to find safer alternatives to the com. used dinitro-o-cresol/oil (DNOC/oil) and hydrogen cyanamide/oil (HC/oil). Mixts. of inorg. and organic nitrogen sources, together with an alkoxylated fatty amine (Acer) adjuvant, providing various total N concns., without (2000/2001) or with (2001/2002) petroleum-oil or vegetable-oil adjuvants, were evaluated against the com. used RBA's on mature and potted 'Golden Delicious' apple trees over two seasons. A total N concentration of 1.0% of the 75:25 inorg.: organic mixture with Acer but without petroleum-oil adjuvant gave the best results. The N mixts. gave as good a response for fruit set and fruit size, but a lower bud break relative to the DNOC and HC after the relatively warm winter of the first season (2000/2001) but there were no differences in any of the parameters monitored after the relatively cold second season (2001/2002). On the potted trees in the very marginal Stellenbosch region, the 1.5% N mixture alone or with 1 % oil gave as good a total bud break as the HC/oil. More studies are necessary to investigate the relationship between the efficacy of winter chilling and use of RBAs.
CC 5-3 (**Agrochemical Bioregulators**)
ST nitrogen adjuvant **rest breaking** agent apple; Malus **rest breaking** agent nitrogen adjuvant
IT Hydrocarbon oils
RL: MOA (Modifier or additive use); USES (Uses)
(BP Ampron oil; **rest-breaking** agents evaluated on 'Golden Delicious' apple trees)
IT Growth and development, plant
(budbreak; **rest-breaking** agents evaluated on 'Golden Delicious' apple trees)
IT **Amines, uses**
RL: MOA (Modifier or additive use); USES (Uses)
(fatty, ethoxylated, Acer; **rest-breaking** agents evaluated on 'Golden Delicious' apple trees)
IT Growth and development, plant
(fruit-set; **rest-breaking** agents evaluated on

'Golden Delicious' apple trees)
IT Rape oil
RL: MOA (Modifier or additive use); USES (Uses)
(methylated; **rest-breaking** agents evaluated on 'Golden Delicious' apple trees)
IT Malus pumila
(**rest-breaking** agents evaluated on 'Golden Delicious' apple trees)
IT **Hormones, plant**
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(**rest-breaking** agents evaluated on 'Golden Delicious' apple trees)
IT **67-48-1**, **Choline** chloride 420-04-2, Hydrogen cyanamide 534-52-1, Dinitro-o-cresol **316373-41-8**, GAN **646053-58-9**
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(**rest-breaking** agents evaluated on 'Golden Delicious' apple trees)
REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L153 ANSWER 2 OF 33 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:588990 HCAPLUS
DOCUMENT NUMBER: 143:111059
TITLE: Vinylogous 4H-pyrones and their preparation and use in promoting plant growth
INVENTOR(S): Flematti, Gavin Ray; Ghisalberti, Emilio Luciano; Dixon, Kingsley Wayne; Trengove, Robert Donald
PATENT ASSIGNEE(S): Botanical Gardens and Parks Authority, Australia; Murdoch University; The University of Western Australia
SOURCE: PCT Int. Appl., 99 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005061515	A1	20050707	WO 2004-AU1824	20041222

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: AU 2003-907066 A 20031222
ED Entered STN: 08 Jul 2005
AB Vinylogous 4H-pyrones, including hitherto unknown 2H-furo[2,3-c]pyran-2-ones, derivs., and analogs prepared from intermediates by methods of the invention, are used to promote bioactivity within plant material and to promote growth, e.g., of smoke-responsive plant species. Thus, 3-methyl-2H-furo[2,3-c]pyran-2-one (I) was isolated from smoke and its

structure was confirmed by synthesis from pyromeconic acid. I, at a level equivalent to that observed with smoke water (1/10 dilution), promoted the germination of Conostylis aculeata and Stylidium affine. I also enhanced the germination percentage of seeds of vegetables (leek and parsley), particularly at warm temps.

IC ICM C07D491-048
ICS C07D493-04; A01N043-16; A01N043-90

CC 5-3 (**Agrochemical Bioregulators**)
Section cross-reference(s): 28

IT Amines, biological studies
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(aliphatic, **surfactants**; in formulations of vinylogous pyrones for promoting plant growth)

IT Fatty acids, biological studies
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(esters, **surfactants**; in formulations of vinylogous pyrones for promoting plant growth)

IT Fungicides
Herbicides
Insecticides
Nematocides
Soil amendments
Surfactants
(in formulations of vinylogous pyrones for promoting plant growth)

IT Polyphosphoric acids
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(sodium salts, **surfactant**; in formulations of vinylogous pyrones for promoting plant growth)

IT **Quaternary ammonium compounds, biological studies**
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(**surfactants**; in formulations of vinylogous pyrones for promoting plant growth)

IT **Growth regulators, plant**
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(vinylogous pyrones including furopyranones as)

IT 471-34-1, Calcium carbonate, biological studies 546-93-0, Magnesium carbonate 1309-48-4, Magnesium oxide, biological studies 1318-00-9, Vermiculite 1318-74-7, Kaolinite, biological studies 1318-93-0, Montmorillonite, biological studies 1344-95-2, Calcium silicate **6484-52-2**, **Ammonium nitrate**, biological studies 7487-88-9, Magnesium sulfate, biological studies 7631-86-9, Silica, biological studies 7778-18-9, Calcium sulfate 7783-20-2, **Ammonium** sulfate, biological studies 9002-86-2, Polyvinyl chloride 9004-34-6, Cellulose, biological studies 9005-25-8, Starch, biological studies 10124-31-9, **Ammonium** phosphate 12174-11-7, Attapulgite 12269-78-2, Pyrophyllite 13397-24-5, Gypsum, biological studies 14807-96-6, Talc, biological studies 16389-88-1, Dolomite, biological studies
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(carrier; in formulations of vinylogous pyrones for promoting plant growth)

IT 57-09-0, **Cetyltrimethylammonium** bromide 124-26-5, Stearamide 126-92-1 143-19-1, Sodium oleate 151-21-3, Sodium lauryl sulfate, biological studies 577-11-7, Sodium dioctyl sulfosuccinate 7758-29-4, Sodium tripolyphosphate 8061-51-6, Sodium ligninsulfonate 8062-15-5, Ligninsulfonic acid 17209-70-0 25155-30-0, Sodium dodecylbenzenesulfonate 26545-58-4, Sodium methylenebisnaphthalenesulfonate 28348-64-3, Sodium isopropylnaphthalenesulfonate
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)

(**surfactant**; in formulations of vinylogous pyrones for promoting plant growth)
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L153 ANSWER 3 OF 33 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:965617 HCAPLUS
DOCUMENT NUMBER: 143:73205
TITLE: Effects of **surfactants** and hydrogen cyanamide on bud sprouting of grapevines cv. Niagara Rosada
AUTHOR(S): Botelho, Renato Vasconcelos; Pires, Erasmo Jose Paioli; Terra, Maurilo Monteiro
CORPORATE SOURCE: Departamento de Agronomia, UNICENTRO, Guarapuava, Brazil
SOURCE: Revista Ceres (2004), 51(295), 325-332
CODEN: RCERA2; ISSN: 0034-737X
PUBLISHER: Universidade Federal de Vicosa
DOCUMENT TYPE: Journal
LANGUAGE: Portuguese
ED Entered STN: 12 Nov 2004
AB A trial was carried out to study the effects of **surfactants** and hydrogen cyanamide on bud sprouting of grape cv. Niagara Rosada in a vineyard located in Jundiai (SP). After pruning, the buds were sprayed with different treatments for dormancy release. The treatments consisted of hydrogen cyanamide (H2CN2) doses of 0, 0.5, 1.0 or 1.5% combined or not with the **surfactants** Iharaguen-S at 1 or 2% or Breakthru at 0.1 or 0.5%. Three evaluations were carried out at 14, 21 and 28 days after **dormancy breaking** of percentage of sprouted buds. The effect of the treatments on the advancement or retardation of sprouting was verified when 50% of the buds had sprouted. Hydrogen cyanamide and the **surfactants**, associated or not, increased and enhanced the sprouting of grape cv. Niagara Rosada.
CC 5-3 (Agrochemical Bioregulators)
ST grape bud sprouting **surfactant** hydrogen cyanamide
IT Vitis labrusca
(Niagara Rosada; **dormancy-breaking** treatments with **surfactants** and hydrogen cyanamide effect on grape bud sprouting)
IT Organ, plant
(bud; **surfactant** and hydrogen cyanamide treatments for **dormancy-breaking** effect on grape bud sprouting)
IT Polyoxyalkylenes, biological studies
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(di-Me polysiloxane-, **Breakthru**; **dormancy-breaking** treatments with **surfactants** and hydrogen cyanamide effect on grape bud sprouting)
IT Polysiloxanes, biological studies
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(di-Me, polyoxyalkylene-, **Breakthru**; **dormancy-breaking** treatments with **surfactants** and hydrogen cyanamide effect on grape bud sprouting)
IT **Surfactants**
(**dormancy-breaking** treatments with **surfactants** and hydrogen cyanamide effect on grape bud sprouting)
IT Growth and development, plant
(sprouting; **surfactant** and hydrogen cyanamide treatments for

dormancy-breaking effect on grape bud sprouting)
IT 420-04-2, Hydrogen cyanamide 855737-14-3, Iharaguen S
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(**dormancy-breaking** treatments with **surfactants** and hydrogen cyanamide effect on grape bud sprouting)
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L153 ANSWER 4 OF 33 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:113379 HCAPLUS
DOCUMENT NUMBER: 138:132626
TITLE: Plant growth regulating compositions containing **chlorocholine** chloride
INVENTOR(S): Schulteis, David T.
PATENT ASSIGNEE(S): Wilbur-Ellis Company, USA
SOURCE: U.S., 7 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6518221	B1	20030211	US 2002-194724	20020711
GR 2003100240	A	20050125	GR 2003-100240	20030530

PRIORITY APPLN. INFO.: US 2002-194724 A 20020711
ED Entered STN: 13 Feb 2003
AB A composition for regulating the growth of plants contains an effective amount of
chlorocholine chloride, poly[oxyethylene(dimethyliminio)ethylene(dimethyliminio)ethylene]dichloride, and **choline** chloride diluted in an inert carrier. The inert carrier may be water, a solvent, or a **surfactant.** The composition with the diluent forms a liquid solution is sprayed on the foliage of subject plants prior to harvest. At least one inorg. salt may be added to the composition to enhance the efficacy of the liquid
solution A first formulation of the solution, preferably including the inorg. salt additive, may be applied early in the plant's development to discourage rank growth without inducing Cut-Out. A second formulation of the solution, having no inorg. salt but including a greater amount of **chlorocholine** chloride, may be applied late in the plant's development, to induce Cut-Out.
IC ICM A01N033-12
ICS A01N059-06; A01N059-16
INCL 504121000; 504118000; 504120000; 504123000; 504148000
CC 5-3 (**Agrochemical Bioregulators**)
ST **chlorocholine choline** chloride WSCP plant growth regulator
IT **Hormones, plant**
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(plant growth regulating compns. containing **chlorocholine** chloride)
IT **6484-52-2, Ammonium nitrate**, biological studies 7487-88-9, Magnesium sulfate, biological studies 7646-85-7, Zinc chloride, biological studies 7733-02-0, Zinc sulfate 7779-88-6, Zinc **nitrate** 7785-87-7, Manganese sulfate 10043-52-4,

Calcium chloride, biological studies **10124-37-5**, Calcium **nitrate** 10377-60-3, Magnesium **nitrate** 10377-66-9, Manganese **nitrate 15245-12-2**, Calcium **ammonium nitrate**
RL: AGR (Agricultural use); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
(in plant growth regulating compns. containing **chlorocholine** chloride)

IT **494772-05-3**
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(plant growth regulating compns. containing)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L153 ANSWER 5 OF 33 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:947522 HCAPLUS
DOCUMENT NUMBER: 143:148139
TITLE: Effects of chemicals on **dormancy breaking** of grape
AUTHOR(S): Tian, Lili; Fang, Jinbao; Gu, Hong; Chen, Jinyong
CORPORATE SOURCE: Zhengzhou Fruit Research Institute, Chinese Academy of Agricultural Sciences, Zhengzhou, 450009, Peop. Rep. China
SOURCE: Xibei Zhiwu Xuebao (2003), 23(6), 997-1000
CODEN: XZXUEV; ISSN: 1000-4025
PUBLISHER: Kexue Chubanshe
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
ED Entered STN: 09 Nov 2004
AB The effects of different chems. on **dormancy breaking** were studied with cultivars "Centennial seedless" and "Flame seedless" in field and "Zana" and "Fujiminori" in green house. The effect of H2CN2 was significant applied in the green house. It stimulated bud break and blossom to occur 9-12 and 10-12 days earlier than in untreated vines resp. The harvest date advanced by almost 2 wk. Lime nitrogen (CaCN2), TDZ, gibberellic acid (GA3), 6- benzyladenine (6-BA), and KNO3 showed different effects on **rest breaking** to some extent.
CC 5-3 (Agrochemical Bioregulators)
ST grape **dormancy breaking** phytohormone
IT Growth and development, plant
(**dormancy-breaking**; effects of chems. on **dormancy breaking** of grape)
IT Vitis vinifera
(effects of chems. on **dormancy breaking** of grape)
IT 77-06-5, Gibberellic acid 156-62-7, Calcium cyanamide 420-04-2, Cyanamide 1214-39-7, 6-Benzyladenine **7757-79-1**, Potassium **Nitrate**, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(effects of chems. on **dormancy breaking** of grape)

L153 ANSWER 6 OF 33 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:331960 HCAPLUS
DOCUMENT NUMBER: 136:320816
TITLE: Agrochemical pesticides formulation aid composition
INVENTOR(S): Stewart, James F.; Reinartz, Heinrich J.; Brown, William G.
PATENT ASSIGNEE(S): Adjuvants Plus Inc., Can.
SOURCE: PCT Int. Appl., 41 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002034047	A1	20020502	WO 2001-CA1508	20011026
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2324677	AA	20020426	CA 2000-2324677	20001026
CA 2426875	AA	20020502	CA 2001-2426875	20011026
AU 2002013707	A5	20020506	AU 2002-13707	20011026
EP 1330159	A1	20030730	EP 2001-982006	20011026
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004511571	T2	20040415	JP 2002-537113	20011026
BR 2001015184	A	20040622	BR 2001-15184	20011026
NZ 525703	A	20050225	NZ 2001-525703	20011026
US 6936572	B2	20050830	US 2003-415294	20011026
US 2004077501	A1	20040422	US 2003-630806	20030731
US 2004132622	A1	20040708	US 2004-415294	20040225
WO 2005011380	A1	20050210	WO 2004-CA1430	20040730
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.:		
CA 2000-2324677	A	20001026
WO 2001-CA1508	W	20011026
US 2003-630806	A	20030731

ED Entered STN: 03 May 2002

AB There is provided an agrochem. formulation aid composition for preparing bioactive and sprayable agrochems., wherein various components for the composition were selected from mineral oil paraffinic distillate and/or aromatic hydrocarbon distillate; 2N-octanol; oleyl-cetyl alc.; polyoxyethylene (2) oleylether ; polyoxyethylene (8) nonylphenolethin and/or ethoxylated tallow amine blend; sodium lauryl sulfate; fatty alc. alkoxylate; terpenes, **diammonium** phosphate; tetrasodium **ethylene diamine** tetracetate; cab-o-sil; fatty acid Me ester; (C18) free fatty acid blend; N-butanol; and Me alc. Also provided are methods of preparing the formulation aid composition on site by mixing various components and methods of preparing sprayable and bioactive agrochem. systems using the formulation aid and non-formulated or formulated agrochems. Also provided are uses of the formulation aid in preparing sprayable and bioactive

agrochem. systems for controlling pests.
IC ICM A01N025-30
ICS A01N025-02
CC 5-5 (**Agrochemical Bioregulators**)
IT Dispersing agents
Emulsifying agents
Penetrating agents
Surfactants
(agrochem. pesticides formulation aid composition containing)
IT **Amines, uses**
RL: MOA (Modifier or additive use); USES (Uses)
(tallow alkyl, ethoxylated; agrochem. pesticides formulation aid composition containing)
IT **6484-52-2, Ammonium nitrate**, biological studies 7664-41-7, **Ammonia**, biological studies 7783-20-2, **Ammonium** sulfate, biological studies 7783-28-0, **Diammonium** phosphate;
RL: AGR (Agricultural use); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
(agrochem. pesticides formulation aid composition containing)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L153 ANSWER 7 OF 33 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:833491 HCAPLUS
DOCUMENT NUMBER: 137:306062
TITLE: Agricultural formulation containing a carboxylic or phosphorus-containing acid, an amine **surfactant**, and a water-soluble agrochemical
INVENTOR(S): Volgas, Greg; Roberts, Johnnie R.; Hayes, Amanda
PATENT ASSIGNEE(S): Helena Holding Company, USA
SOURCE: U.S. Pat. Appl. Publ., 8 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002160916	A1	20021031	US 2002-81627	20020220
US 6831038	B2	20041214		

PRIORITY APPLN. INFO.: US 2001-270311P P 20010221
ED Entered STN: 01 Nov 2002
AB An agricultural composition comprises: (a) a carboxylic acid or phosphorus containing acid providing that the phosphorus containing acid is not a glyphosate,
(b) an amine containing **surfactant** and (c) at least one water soluble agricultural chemical, with the proviso that the composition contains less than 3
percent by weight of phosphate ester **surfactant** and the proviso that if a carboxylic acid and glyphosate are present, then said glyphosate and carboxylic acid are in a weight/weight ratio of glyphosate to carboxylic acid in a 8:1 to about 2:1. The water-soluble agricultural chemical is a fertilizer or a pesticide.
IC ICM A01N057-00
ICS A01N057-18; A01N025-02; A01N025-04; A01N025-16
INCL 504194000
CC 5-4 (**Agrochemical Bioregulators**)
ST carboxylic phosphorus acid amine **surfactant** agrochem formulation

IT Carboxylic acids, biological studies
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(**ammonium** salts; in formulations containing carboxylic or phosphorus-containing acid and amine **surfactant**)
IT Agrochemical formulations
(containing carboxylic or phosphorus-containing acid, amine **surfactant**, and water-soluble agrochem.)
IT Carboxylic acids, uses
RL: MOA (Modifier or additive use); USES (Uses)
(dicarboxylic; in formulations containing water-soluble agrochem. and amine **surfactant**)
IT Phosphates, uses
RL: MOA (Modifier or additive use); USES (Uses)
(esters; **surfactant** in agricultural formulation containing carboxylic or phosphorus-containing acid and water-soluble agrochem.)
IT **Amines, uses**
RL: MOA (Modifier or additive use); USES (Uses)
(fatty, alkoxylated; **surfactant** in agricultural formulation containing carboxylic or phosphorus-containing acid and water-soluble agrochem.)
IT Fungicides
Herbicides
Insecticides
Pesticides
(in formulations containing carboxylic or phosphorus-containing acid and amine **surfactant**)
IT Fertilizers
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(in formulations containing carboxylic or phosphorus-containing acid and amine **surfactant**)
IT Carboxylic acids, uses
RL: MOA (Modifier or additive use); USES (Uses)
(in formulations containing water-soluble agrochem. and amine **surfactant**)
IT Acids, uses
RL: MOA (Modifier or additive use); USES (Uses)
(phosphorus-containing; in formulations containing water-soluble agrochem. and amine **surfactant**)
IT **Amines, uses**
RL: MOA (Modifier or additive use); USES (Uses)
(**surfactant** in agricultural formulation containing carboxylic or phosphorus-containing acid and water-soluble agrochem.)
IT **Auxins**
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(synthetic; in formulations containing carboxylic or phosphorus-containing acid and amine **surfactant**)
IT **Amines, uses**
RL: MOA (Modifier or additive use); USES (Uses)
(tallow alkyl, ethoxylated; **surfactant** in agricultural formulation containing carboxylic or phosphorus-containing acid and water-soluble agrochem.)
IT Fertilizers

RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(trace element; in formulations containing carboxylic or phosphorus-containing acid and amine **surfactant**)

IT Carboxylic acids, uses
RL: MOA (Modifier or additive use); USES (Uses)
(tricarboxylic acids; in formulations containing water-soluble agrochem. and amine **surfactant**)

IT 57-13-6, Urea, biological studies 93-65-2, Mecoprop 93-76-5, 2,4,5-Trichlorophenoxy acetic acid 94-75-7, 2,4-Dichlorophenoxy acetic acid, biological studies 94-81-5, MCPB 94-82-6, 2,4-Dichlorophenoxy butyric acid 120-36-5, Dichlorprop 133-90-4, Chloramben 631-61-8, **Ammonium** acetate. 1071-83-6, Glyphosate 1702-17-6, Clopyralid 1918-00-9, Dicamba 1918-02-1, Picloram 2008-39-1 2300-66-5 **6484-52-2**, **Ammonium nitrate**, biological studies 7439-89-6D, Iron, salts 7439-95-4D, Magnesium, salts 7439-96-5D, Manganese, salts 7440-42-8D, Boron., salts 7440-50-8D, Copper, salts 7440-66-6D, Zinc, salts 7632-50-0, **Ammonium** citrate 7758-11-4, Di-potassium phosphate 7778-77-0, Mono-potassium phosphate 7783-20-2, **Ammonium** sulfate, biological studies 15165-67-0, Dichlorprop-P 16484-77-8, Mecoprop-P 26469-60-3, Quinoline carboxylic acid 27193-83-5, Monochlorophenoxy acetic acid 32075-31-3, Pyridine carboxylic acid, 38641-94-0, Glyphosate, Isopropylamine salt 51276-47-2, Glufosinate 55335-06-3, Triclopyr 68586-07-2 69377-81-7, Fluroxypyr 81591-81-3, Glyphosate-trimesium 84087-01-4, Quinclorac 84496-56-0, Clomeprop 90717-03-6, Quinmerac
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(in formulations containing carboxylic or phosphorus-containing acid and amine **surfactant**)

IT 64-18-6, Formic acid, uses 64-19-7, Acetic acid, uses 77-92-9, Citric acid., uses 79-09-4, Propionic acid, uses 107-92-6, Butyric acid, uses 109-52-4, Valeric acid., uses 110-15-6, Succinic acid, uses 110-94-1, Glutaric acid. 141-82-2, Malonic acid, uses 144-62-7, Oxalic acid, uses 7664-38-2, Phosphoric acid., uses 13598-36-2, Phosphorous acid.
RL: MOA (Modifier or additive use); USES (Uses)
(in formulations containing water-soluble agrochem. and amine **surfactant**)

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L153 ANSWER 8 OF 33 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:559162 HCAPLUS
DOCUMENT NUMBER: 137:258801
TITLE: Effects of new **rest-breaking** chemicals on flowering, shoot production and yield of subtropical tree crops
AUTHOR(S): George, A. P.; Broadley, R. H.; Nissen, R. J.; Ward, G.
CORPORATE SOURCE: Maroochy Research Station, Queensland Horticulture Institute, Nambour, Q4560, Australia
SOURCE: Acta Horticulturae (2002), 575(Vol. 2, Proceedings of the International Symposium on Tropical and Subtropical Fruits, 2000, Volume 2), 835-840
CODEN: AHORA2; ISSN: 0567-7572
PUBLISHER: International Society for Horticultural Science
DOCUMENT TYPE: Journal
LANGUAGE: English

ED Entered STN: 29 Jul 2002
AB Chilling, or the alleviation of drought, is required to cause the transition of both vegetative and floral buds of temperate or semi-deciduous subtropical fruit species from the dormant to active state. The chilling requirement of the variety must closely match the amount of chilling received at the location otherwise the variety will exhibit signs of lack of chilling such as sporadic budbreak and uneven shoot development along branches. Several expts. were conducted in southeast Queensland to determine whether various combinations of new **rest-breaking** chems. could induce more uniform budbreak and increase flowering of a range of low-chill temperate and subtropical species (low-chill stonefruit, persimmon and custard apple). These expts. demonstrated the beneficial effects of using restbreaking chems. to **break dormancy**, advance flowering and fruit maturity, and increase lateral number by reducing strong apical dominance. The most successful **rest-breaking** chems. were **Armobreak** and Waiken but only when combined with potassium **nitrate** which greatly improved their efficacy by 20-30%. Compared with Dormex, these combinations appear to have relatively low mammalian- and phyto-toxicity increasing their potential for safe com. use. Further testing on a wider range of species/varieties and environments are needed to determine the optimum concns. and timing.
CC 5-3 (Agrochemical Bioregulators)
ST **dormancy breaking** subtropical fruit tree
IT Amines, biological studies
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(N-tallow alkylalkylenediamines, ethoxylated propoxylated; effects of **rest-breaking** chems. on flowering, shoot production and yield of subtropical fruit trees)
IT Growth and development, plant
(budbreak; effects of **rest-breaking** chems. on flowering, shoot production and yield of subtropical fruit trees)
IT Growth and development, plant
(**dormancy-breaking**; effects of **rest-breaking** chems. on flowering, shoot production and yield of subtropical fruit trees)
IT Prunus persica nectarina
(effects of **rest-breaking** chems. on flowering, shoot production and yield of)
IT Growth and development, plant
(effects of **rest-breaking** chems. on flowering, shoot production and yield of subtropical fruit trees)
IT Hormones, plant
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(effects of **rest-breaking** chems. on flowering, shoot production and yield of subtropical fruit trees)
IT Diospyros
(non-astringent; effects of **rest-breaking** chems. on flowering, shoot production and yield of)
IT Annona
(spp. hybrids; effects of **rest-breaking** chems. on flowering, shoot production and yield of)
IT Fruit tree
(subtropical; effects of **rest-breaking** chems. on flowering, shoot production and yield of)
IT 77-06-5, GA3 420-04-2, Dormex **7757-79-1**, Potassium **nitrate**, biological studies 462094-02-6, Waiken
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL

(Biological study); USES (Uses)
(effects of **rest-breaking** chems. on flowering, shoot production and yield of subtropical fruit trees)
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L153 ANSWER 9 OF 33 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:816374 HCAPLUS
DOCUMENT NUMBER: 135:340484
TITLE: Seed treatment composition for mitigating stress effects on plants
INVENTOR(S): Li, Paul Pen Hsiang; Jian, Ling-Cheng
PATENT ASSIGNEE(S): Regents of the University of Minnesota, USA
SOURCE: PCT Int. Appl., 27 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001082697	A2	20011108	WO 2001-US13634	20010427
WO 2001082697	A3	20020704		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6455468	B1	20020924	US 2000-560117	20000428

PRIORITY APPLN. INFO.: US 2000-560117 A 20000428
ED Entered STN: 09 Nov 2001
AB The invention provides a composition useful for treating seeds, including at least one **choline** compound, a calcium salt, a potassium salt, and salicylic acid, and optionally containing an alkanolamine and/or glycerol.
IC ICM A01N033-12
ICS A01N033-12; A01N059-08; A01N059-06; A01N037-40; A01N033-08; A01N031-02
CC 5-3 (**Agrochemical Bioregulators**)
IT 56-81-5, Glycerol., biological studies **67-48-1**, **Choline** chloride 69-72-7, Salicylic acid, biological studies 141-43-5, Aminoethanol, biological studies 999-81-5, **ChloroCholine** chloride 7440-09-7D, Potassium, salts, biological studies 7440-70-2D, Calcium, salts, biological studies 7447-40-7, Potassium chloride, biological studies **7757-79-1**, Potassium **nitrate**, biological studies 10043-52-4, Calcium chloride, biological studies **10124-37-5**, Calcium **nitrate**
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(in seed treatment composition for mitigating stress effects on plants)

L153 ANSWER 10 OF 33 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:6445 HCAPLUS
DOCUMENT NUMBER: 134:128631
TITLE: Chemical studies in **breaking** the **dormancy** of Paspalum paniculatum L. seeds
AUTHOR(S): de Almeida Lula, Alexandre; de Alvarenga, Amauri

Alves; de Almeida, Luciano Pessoa; Alves, Jose Donizeti; Magalhaes, Marcelo Murad
CORPORATE SOURCE: Biologo, Mestre em Agronomia/Fisiologia Vegetal, Universidade Federal de Lavras(UFLA), Lavras, Brazil
SOURCE: Ciencia e Agrotecnologia (2000), 24(2), 358-366
CODEN: CIAGFZ; ISSN: 1413-7054
PUBLISHER: Universidade Federal de Lavras
DOCUMENT TYPE: Journal
LANGUAGE: Portuguese
ED Entered STN: 04 Jan 2001
AB Paspalum paniculatum L. is a forage species well adapted to temporary flood. However, its seeds has low percentages of germination due to some factors inducing dormancy. The objective of this work was to determine the causes of seed dormancy and the most efficient treatments to overcome this problem. The treatments used were: chemical scarification by seed immersion in sulfuric acid, inhibition using potassium **nitrate** and gibberellic acid treatment. The Tetrazolium test showed that 71% of seeds were viable. The inhibition test showed that water absorption by the seeds was slow, indicating the possibility of a tegument impermeability. The best results were obtained through chemical scarification by immersion in sulfuric acid during a period of 20 min (44% of seed germination). Other treatments like potassium **nitrate** and gibberellic acid were not efficient in **dormancy breaking**, due to a low percentage of germination showed.
CC 11-3 (Plant Biochemistry)
ST Paspalum **dormancy breaking** seed germination
IT Germination
Paspalum paniculatum
(chemical studies in **breaking dormancy** of Paspalum paniculatum L. seeds)
IT Growth and development, plant
(**dormancy-breaking**; chemical studies in **breaking dormancy** of Paspalum paniculatum L. seeds)
IT 77-06-5, Gibberellic acid 7664-93-9, Sulfuric acid, biological studies **7757-79-1**, Potassium **nitrate**, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(chemical studies in **breaking dormancy** of Paspalum paniculatum L. seeds)
REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L153 ANSWER 11 OF 33 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:141896 HCAPLUS
DOCUMENT NUMBER: 132:330822
TITLE: Effects of gibberellic acid and **dormancy-breaking** chemicals on flower development of Rhododendron pulchrum Sweet and R. scabrum Don
AUTHOR(S): Chang, Y.-S.; Sung, F.-H.
CORPORATE SOURCE: Section 4, No. 1, Department of Horticulture, National Taiwan University, Taipei, Taiwan
SOURCE: Scientia Horticulturae (Amsterdam) (2000), 83(3,4), 331-337
CODEN: SHRTAH; ISSN: 0304-4238
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 02 Mar 2000
AB Flower bud dormancy is a restriction in regulating the azalea flowering period. Although many studies have been conducted on ending dormancy by cold temperature and GA treatment, little information is available on the

effects of **dormancy-breaking** chems. on **terminating** azalea flower bud **dormancy.** The purpose of this study was to determine whether **dormancy-breaking** chems. affect the **termination** of flower bud **dormancy** and precipitate anthesis. Three-year-old pot-grown plants of Rhododendron pulchrum were sprayed with **dormancy-breaking** chems.: 500 ppm GA3, 0.245% cyanamide, 8% mineral oil, 2% potassium **nitrate**, and 0.5% thiourea on 31 Dec. 1995. The results showed that GA3 and thiourea brought on flower bud anthesis. Five-year-old pot-grown plants of R. scabrum were sprayed with similar **dormancy -breaking** chems. on 23 Dec. 1997 and exhibited the same results. In addition, potassium **nitrate** did not hasten flower bud anthesis, but it increased flower diameter The results suggest that thiourea may be used to regulate the azalea flowering period.

CC 5-3 (Agrochemical Bioregulators)

ST **dormancy breaking** anthesis Rhododendron; gibberellate potassium **nitrate** thiourea Rhododendron

IT Growth and development, plant
(anthesis; effects of gibberellic acid and **dormancy-breaking** chems. on flower development of Rhododendron pulchrum Sweet and R. scabrum Don)

IT Growth and development, plant
(**dormancy-breaking**; effects of gibberellic acid and **dormancy-breaking** chems. on flower development of Rhododendron pulchrum Sweet and R. scabrum Don)

IT Rhododendron pulchrum
Rhododendron scabrum
(effects of gibberellic acid and **dormancy-breaking** chems. on flower development of Rhododendron pulchrum Sweet and R. scabrum Don)

IT Hydrocarbon oils
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(effects of gibberellic acid and **dormancy-breaking** chems. on flower development of Rhododendron pulchrum Sweet and R. scabrum Don)

IT 62-56-6, Thiourea, biological studies 77-06-5, GA3 420-04-2, Cyanamide **7757-79-1**, Potassium **nitrate**, biological studies
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(effects of gibberellic acid and **dormancy-breaking** chems. on flower development of Rhododendron pulchrum Sweet and R. scabrum Don)

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L153 ANSWER 12 OF 33 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:753899 HCAPLUS
DOCUMENT NUMBER: 134:82127
TITLE: Preliminary results for the evaluation of new **rest breaking** agents on table grapes in South Africa
AUTHOR(S): Lombard, P. J.; Viljoen, J. A.; Wolf, E. E. H.
CORPORATE SOURCE: ARC-Fruit, Vine and Wine Research Institute, Stellenbosch, 7599, S. Afr.
SOURCE: Acta Horticulturae (2000), 514(Proceedings of the XXV International Horticultural Congress, 1998, Pt. 4), 99-112

CODEN: AHORA2; ISSN: 0567-7572
PUBLISHER: International Society for Horticultural Science
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 26 Oct 2000
AB **Rest breaking** agents play an important role in the production of table grapes in the early ripening regions of South Africa. The use of **rest breaking** agents is often associated with uneven bud burst, decreased fertility and poor bunch quality. Hydrogen cyanamide (Dormex) is the main **rest breaking** agent registered for use on vines. Three trials were initiated on two Sultanina clone H5 (Vitis vinifera L.). The **rest breaking** agent GAN (urea **ammonium nitrate** and calcium **nitrate**) together with various adjuvants (**Armobreak** and ACAR 97S21) and application times, was evaluated and compared to a standard hydrogen cyanamide treatment. Although the standard cyanamide treatment induced bud burst earlier than GAN, these treatments did not differ regarding yield, quality and bunch ripeness at harvest. GAN, in combination with the adjuvants, was most effective applied four and a half weeks before expected bud burst. Climatic conditions before bud burst in the 1996/97 season were normal, but unseasonably cold and wet between bud burst and harvest. In 1997/98, conditions were cooler before bud burst, but dry and warm until harvest. GAN is effective on table grapes, when used in conjunction with the adjuvants tested.
CC 5-3 (**Agrochemical Bioregulators**)
ST **dormancy breaking** grape
IT **Amines, uses**
RL: MOA (Modifier or additive use); USES (Uses)
(N-tallow alkylalkylenediamines, ethoxylated propoxylated; adjuvant for **dormancy breaking** agents used in table grapes)
IT Growth and development, plant
(**dormancy**; **dormancy breaking** in table grapes)
IT Grape
(table; **dormancy breaking** in)
IT **316373-41-8**, GAN
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(GAN; **dormancy breaking** in table grapes by)
IT 316371-60-5, ACAR 97S21
RL: MOA (Modifier or additive use); USES (Uses)
(adjuvant for **dormancy breaking** agents used in table grapes)
IT 420-04-2, Dormex
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(**dormancy breaking** in table grapes by)
REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, MEDLINE, BIOSIS, CABA, PASCAL, WPIX' -
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L153 ANSWER 13 OF 33 MEDLINE on STN
ACCESSION NUMBER: 2005188447 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15821982
TITLE: Gene expression analysis by cDNA-AFLP highlights a set of new signaling networks and translational control during

seed dormancy breaking in
Nicotiana plumbaginifolia.

AUTHOR: Bove Jerome; Lucas Philippe; Godin Beatrice; Oge Laurent; Jullien Marc; Grappin Philippe
CORPORATE SOURCE: UMR 204 de Biologie des Semences, Institut National de la Recherche Agronomique, Centre de Versailles-Grignon, route de Saint Cyr, 78026 Versailles Cedex, France.
SOURCE: Plant molecular biology, (2005 Mar) 57 (4) 593-612.
Journal code: 9106343. ISSN: 0167-4412.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AJ608676; GENBANK-AJ608677; GENBANK-AJ608678;
GENBANK-AJ608679; GENBANK-AJ608680; GENBANK-AJ608681;
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GENBANK-AJ617144; GENBANK-AJ617145; GENBANK-AJ617146;
GENBANK-AJ617147; GENBANK-AJ617148; GENBANK-AJ617149;
GENBANK-AJ617150; GENBANK-AJ617151; GENBANK-AJ617152;
GENBANK-AJ617153; GENBANK-AJ617154; GENBANK-AJ617155;
GENBANK-AJ617156; GENBANK-AJ617157; GENBANK-AJ617158;
GENBANK-AJ617159; GENBANK-AJ617160; GENBANK-AJ617161;
GENBANK-AJ617162; GENBANK-AJ617163; GENBANK-AJ617164;
GENBANK-AJ617165; GENBANK-AJ617166; GENBANK-AJ617167;
GENBANK-AJ617168; GENBANK-AJ617169; GENBANK-AJ617170;
GENBANK-AJ617171; GENBANK-AJ617172; GENBANK-AJ617173;
GENBANK-AJ617174; GENBANK-AJ617175; GENBANK-AJ617176;
GENBANK-AJ617177; GENBANK-AJ617178; GENBANK-AJ617179;

GENBANK-AJ617180; GENBANK-AJ617181; GENBANK-AJ617182;
GENBANK-AJ617183; GENBANK-AJ617184; GENBANK-AJ617185;
GENBANK-AJ617186; GENBANK-AJ617187; GENBANK-AJ617188;
GENBANK-AJ617189; GENBANK-AJ617190; GENBANK-AJ617191;
GENBANK-AJ617192; GENBANK-AJ617193; GENBANK-AJ617194;
GENBANK-AJ617195; GENBANK-AJ617196; GENBANK-AJ617197;
GENBANK-AJ617198; GENBANK-AJ617199; GENBANK-AJ617200;
GENBANK-AJ617201; GENBANK-AJ617202; GENBANK-AJ617203;
GENBANK-AJ617204; GENBANK-AJ617205; GENBANK-AJ617206;
GENBANK-AJ617207; GENBANK-AJ617208; GENBANK-AJ617209;
GENBANK-AJ617210; GENBANK-AJ617211; GENBANK-AJ617212;
GENBANK-AJ617213; GENBANK-AJ617214; GENBANK-AJ617215;
GENBANK-AJ617216; GENBANK-AJ617217; GENBANK-AJ617218;
GENBANK-AJ617219; GENBANK-AJ617220; GENBANK-AJ617221;
GENBANK-AJ617222; GENBANK-AJ617223; GENBANK-AJ617224;
GENBANK-AJ617225; GENBANK-AJ617226; GENBANK-AJ617227;
GENBANK-AJ617228; GENBANK-AJ617229; GENBANK-AJ617230;
GENBANK-AJ617231; GENBANK-AJ617232; GENBANK-AJ617233;
GENBANK-AJ617234; GENBANK-AJ617235; GENBANK-AJ617236;
GENBANK-AJ617237; GENBANK-AJ617238; GENBANK-AJ617239;
GENBANK-AJ617240; GENBANK-AJ617241; GENBANK-AJ617242;
GENBANK-AJ617243; GENBANK-AJ617244; GENBANK-AJ617245;
GENBANK-AJ617246; GENBANK-AJ617247; GENBANK-AJ617248;
GENBANK-AJ617249; GENBANK-AJ617250; GENBANK-AJ617251;
GENBANK-AJ617252; GENBANK-AJ617253; GENBANK-AJ617254;
GENBANK-AJ617255; GENBANK-AJ617256; GENBANK-AJ617257;
GENBANK-AJ617258; GENBANK-AJ617259; GENBANK-AJ617260

ENTRY MONTH: 200507

ENTRY DATE: Entered STN: 20050412
Last Updated on STN: 20050722
Entered Medline: 20050721

ED Entered STN: 20050412
Last Updated on STN: 20050722
Entered Medline: 20050721

AB **Seed** dormancy in Nicotiana plumbaginifolia is characterized by an abscisic acid accumulation linked to a pronounced germination delay. Dormancy **can** be released by 1 year after-ripening treatment. Using a cDNA-amplified fragment length polymorphism (cDNA-AFLP) approach we compared the gene expression patterns of dormant and after-ripened **seeds**, air-dry or during one day imbibition and analyzed 15,000 cDNA fragments. Among them 1020 were found to be differentially regulated by dormancy. Of 412 sequenced cDNA fragments, 83 were assigned to a known function by search similarities to public databases. The functional categories of the identified **dormancy** maintenance and **breaking** responsive genes, give evidence that after-ripening turns in the air-dry **seed** to a new developmental program that modulates, at the RNA level, components of translational control, signaling networks, transcriptional control and regulated proteolysis.

CT Check Tags: Comparative Study
Blotting, Northern
DNA, Complementary: CH, chemistry
DNA, Complementary: GE, genetics
*Gene Expression Profiling: MT, methods
Gene Expression Regulation, Developmental: GE, genetics
Gene Expression Regulation, Plant: GE, genetics
Germination: GE, genetics
Molecular Sequence Data
Nucleic Acid Amplification Techniques: MT, methods
*Protein Biosynthesis: GE, genetics
Reproducibility of Results

Research Support, Non-U.S. Gov't
Reverse Transcriptase Polymerase Chain Reaction
*Seeds: GE, genetics
Seeds: GD, growth & development
Sequence Analysis, DNA
*Signal Transduction: GE, genetics
*Tobacco: GE, genetics
CN 0 (DNA, Complementary)

L153 ANSWER 14 OF 33 MEDLINE on STN
ACCESSION NUMBER: 2005198994 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15832682
TITLE: Possible role of catalase in post-**dormancy** bud **break** in **grapevines**.
AUTHOR: Perez Francisco J; Lira Waldo
CORPORATE SOURCE: Lab. de Bioquimica Vegetal, Facultad de Ciencias, Universidad de Chile, Casilla 653, Santiago, Chile.. frperez@uchile.cl
SOURCE: Journal of plant physiology, (2005 Mar) 162 (3) 301-8. Journal code: 9882059. ISSN: 0176-1617.
PUB. COUNTRY: Germany: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200505
ENTRY DATE: Entered STN: 20050419
Last Updated on STN: 20050513
Entered Medline: 20050512
ED Entered STN: 20050419
Last Updated on STN: 20050513
Entered Medline: 20050512
AB Changes in the activity of catalase (Cat) and in the levels of H2O2 were followed throughout dormancy in buds of **grapevines** (Vitis vinifera L.). In **grapevines** grown in the Elqui valley in Chile, a region with warm-winters, the activity of Cat increased during the recess period of buds, reaching a maximum and thereafter decreased to less than one third of its maximal activity. Three isoforms of Cat were detected in extracts of buds by native PAGE analysis, and the extracted activity was inhibited competitively by hydrogen cyanamide (HC), a potent bud-break agent. Furthermore, HC applications to field-grown **grapevines** in addition to the expected effect on advancing bud break, reduced the Cat activity during bud dormancy. Similar reductions were observed during dormancy in buds of **grapevines** grown in the Central valley in Chile, a region with temperate winters, suggesting that HC and winter chilling inhibits the activity of the main H2O2 degrading enzyme in **grape** buds. A transient rise in H2O2 levels preceded the release of buds from endodormancy, moreover, the peak of H2O2 and the onset of bud break occurred earlier in HC treated than in control **grapevines**, suggesting the participation of H2O2 as a signal molecule in the release of endodormancy in **grape** buds. The relationship between Cat inhibition, rise in H2O2 levels and initiation of bud break are discussed.
CT Catalase: AI, antagonists & inhibitors
*Catalase: ME, metabolism
Chile
Flowers: EN, enzymology
*Flowers: PH, physiology
Hydrogen Peroxide: PD, pharmacology
Isoenzymes: ME, metabolism
Kinetics

Research Support, Non-U.S. Gov't
Vitis: DE, drug effects
Vitis: EN, enzymology
Vitis: GD, growth & development
*Vitis: PH, physiology
RN 7722-84-1 (Hydrogen Peroxide)
CN 0 (Isoenzymes); EC 1.11.1.6 (Catalase)

L153 ANSWER 15 OF 33 MEDLINE on STN
ACCESSION NUMBER: 2004442408 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15133666
TITLE: Dormancy of Arabidopsis **seeds** and barley grains **can** be broken by nitric oxide.
AUTHOR: Bethke Paul C; Gubler Frank; Jacobsen John V; Jones Russell L
CORPORATE SOURCE: Department of Plant and Microbial Biology, University of California, Berkeley, CA 94720-3102, USA.. pcbethke@nature.berkeley.edu
SOURCE: Planta, (2004 Sep) 219 (5) 847-55. Electronic Publication: 2004-05-06.
Journal code: 1250576. ISSN: 0032-0935.
PUB. COUNTRY: Germany: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200412
ENTRY DATE: Entered STN: 20040908
Last Updated on STN: 20041219
Entered Medline: 20041209
ED Entered STN: 20040908
Last Updated on STN: 20041219
Entered Medline: 20041209
AB **Seeds** of Arabidopsis thaliana (L.) Heynh. and grains of barley (Hordeum vulgare L.) were used to characterize the affects of nitric oxide (NO) on **seed** dormancy. **Seeds** of the C24 and Col-1 ecotypes of Arabidopsis are almost completely dormant when freshly harvested, but dormancy was broken by stratification for 3 days at 4 degrees C or by imbibition of **seeds** with the NO donor sodium nitroprusside (SNP). This effect of SNP on dormancy of Arabidopsis **seeds** was concentration dependent. SNP concentrations as low as 25 microM reduced dormancy and stimulated germination, but SNP at 250 microM or more impaired **seedling** development, including **root** growth, and inhibited germination. Dormancy was also reduced when Arabidopsis **seeds** were exposed to gases that are generated by solutions of SNP. **Nitrate** and nitrite, two other oxides of nitrogen, reduced the dormancy of Arabidopsis **seeds**, but much higher concentrations of these were required compared to SNP. Furthermore, the kinetics of germination were slower for **seeds** imbibed with either **nitrate** or nitrite than for **seeds** imbibed with SNP. Although **seeds** imbibed with SNP had reduced dormancy, **seeds** imbibed with SNP and abscisic acid (ABA) remained strongly dormant. This may indicate that the effects of ABA action on germination are downstream of NO action. The NO scavenger 2-(4-carboxyphenyl)-4,4,5,5-tetramethylimidazoline-1-oxyl-3 oxide (cPTIO) strengthened dormancy of unstratified and briefly stratified Arabidopsis **seeds**. Dormancy of three cultivars of barley was also reduced by SNP. Furthermore, dormancy in barley grain was strengthened by imbibition of grain with cPTIO. The data presented here support the conclusion that NO is a potent **dormancy breaking** agent for **seeds** and grains. Experiments with the NO scavenger suggest that

NO is an endogenous regulator of **seed** dormancy.
CT Arabidopsis: DE, drug effects
*Arabidopsis: PH, physiology
*Germination: PH, physiology
Hordeum: DE, drug effects
*Hordeum: PH, physiology
*Nitric Oxide: PD, pharmacology
Nitroprusside: PD, pharmacology
Research Support, Non-U.S. Gov't
Seeds: DE, drug effects
***Seeds: PH, physiology**
Time Factors
RN 10102-43-9 (Nitric Oxide); 15078-28-1 (Nitroprusside)

L153 ANSWER 16 OF 33 MEDLINE on STN
ACCESSION NUMBER: 2004339115 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15060827
TITLE: Changes in endogenous abscisic acid levels during dormancy release and maintenance of mature **seeds**: studies with the Cape Verde Islands ecotype, the dormant model of Arabidopsis thaliana.
AUTHOR: Ali-Rachedi Sonia; Bouinot Denise; Wagner Marie-Helene; Bonnet Magda; Sotta Bruno; Grappin Philippe; Jullien Marc
CORPORATE SOURCE: UER de Physiologie Vegetale, INA-PG, UMR INRA-INAPG Biologie des Semences, 16 rue Claude Bernard, 75231, Paris Cedex 05, France.
SOURCE: Planta, (2004 Jul) 219 (3) 479-88. Electronic Publication: 2004-04-02.
Journal code: 1250576. ISSN: 0032-0935.
PUB. COUNTRY: Germany: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200410
ENTRY DATE: Entered STN: 20040709
Last Updated on STN: 20041006
Entered Medline: 20041005
ED Entered STN: 20040709
Last Updated on STN: 20041006
Entered Medline: 20041005
AB Mature **seeds** of the Cape Verde Islands (Cvi) ecotype of Arabidopsis thaliana (L.) Heynh. show a very marked dormancy. Dormant (D) **seeds** completely fail to germinate in conditions that are favourable for germination whereas non-dormant (ND) **seeds** germinate easily. Cvi **seed** dormancy is alleviated by after-ripening, stratification, and also by **nitrate** or fluridone treatment. Addition of gibberellins to D **seeds** does not suppress dormancy efficiently, suggesting that gibberellins are not directly involved in the **breaking** of **dormancy**.
Dormancy expression of Cvi **seeds** is strongly dependent on temperature: D **seeds** do not germinate at warm temperatures (20-27 degrees C) but do so easily at a low temperature (13 degrees C) or when a fluridone treatment is given to D **seeds** sown at high temperature. To investigate the role of abscisic acid (ABA) in dormancy release and maintenance, we measured the ABA content in both ND and D **seeds** imbibed using various **dormancy-breaking** conditions. It was found that dry D **seeds** contained higher amounts of ABA than dry ND after-ripened **seeds**. During early imbibition in standard conditions, there was a decrease in ABA content in both **seeds**, the rate of which was slower in D **seeds**.

Three days after sowing, the ABA content in D **seeds** increased specifically and then remained at a high level. When imbibed with fluridone, **nitrate** or stratified, the ABA content of D **seeds** decreased and reached a level very near to that of ND **seeds**. In contrast, gibberellic acid (GA3) treatment caused a transient increase in ABA content. When D **seeds** were sown at low optimal temperature their ABA content also decreased to the level observed in ND **seeds**. The present study indicates that Cvi D and ND **seeds can** be easily distinguished by their ability to synthesize ABA following imbibition. Treatments used here to **break dormancy** reduced the ABA level in imbibed D **seeds** to the level observed in ND **seeds**, with the exception of GA3 treatment, which was active in promoting germination only when ABA synthesis was inhibited.

CT *Abscisic Acid: ME, metabolism
Africa, Western
Arabidopsis: DE, drug effects
Arabidopsis: GD, growth & development
*Arabidopsis: ME, metabolism
Germination
Gibberellins: PD, pharmacology
Models, Biological
Nitrates: PD, pharmacology
Pyridones: PD, pharmacology
Seeds: DE, drug effects
Seeds: GD, growth & development
Seeds: ME, metabolism
Temperature

RN 21293-29-8 (Abscisic Acid); 59756-60-4 (fluridone)

CN 0 (Gibberellins); 0 (**Nitrates**); 0 (Pyridones)

L153 ANSWER 17 OF 33 MEDLINE on STN

ACCESSION NUMBER: 2004066368 MEDLINE

DOCUMENT NUMBER: PubMed ID: 14729916

TITLE: Activation of gibberellin biosynthesis and response pathways by low temperature during imbibition of Arabidopsis thaliana **seeds.**

AUTHOR: Yamauchi Yukika; Ogawa Mikihiro; Kuwahara Ayuko; Hanada Atsushi; Kamiya Yuji; Yamaguchi Shinjiro

CORPORATE SOURCE: Plant Science Center, RIKEN, Institute of Physical and Chemical Research, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan.

SOURCE: Plant cell, (2004 Feb) 16 (2) 367-78. Electronic Publication: 2004-01-16.
Journal code: 9208688. ISSN: 1040-4651.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200406

ENTRY DATE: Entered STN: 20040210
Last Updated on STN: 20040625
Entered Medline: 20040623

ED Entered STN: 20040210
Last Updated on STN: 20040625
Entered Medline: 20040623

AB Exposure of imbibed **seeds** to low temperature (typically 4 degrees C) is widely used to **break seed dormancy** and to improve the frequency of germination. However, the mechanism by which temperature accelerates germination is largely

unknown. Using DNA microarray and gas chromatography-mass spectrometry analyses, we found that a subset of gibberellin (GA) biosynthesis genes were upregulated in response to low temperature, resulting in an increase in the level of bioactive GAs and transcript abundance of GA-inducible genes in imbibed Arabidopsis thaliana **seeds.** Using a loss-of-function mutant, the cold-inducible GA biosynthesis gene, AtGA3ox1, was shown to play an essential role in mediating the effect of low temperature. Besides temperature, AtGA3ox1 also is positively regulated by active phytochrome and negatively regulated by GA activity. We show that both red light and GA deficiency act in addition to low temperature to elevate the level of AtGA3ox1 transcript, indicating that multiple signals are integrated by the AtGA3ox1 gene to control **seed** germination. When induced by low temperature, AtGA3ox1 mRNA was detectable by in situ RNA hybridization in an additional set of cell types relative to that in red light-induced **seeds.** Our results illustrate that the GA biosynthesis and response pathways are activated during **seed** imbibition at low temperature and suggest that the cellular distribution of bioactive GAs may be altered under different light and temperature conditions.

CT **Arabidopsis: EN, enzymology**
*Arabidopsis: GE, genetics
Arabidopsis: GD, growth & development
Cold
Gene Expression Regulation, Enzymologic: RE, radiation effects
Gene Expression Regulation, Plant: RE, radiation effects
*Germination: PH, physiology
*Gibberellins: BI, biosynthesis
In Situ Hybridization
Light
Mixed Function Oxygenases: GE, genetics
*Mixed Function Oxygenases: ME, metabolism
Mutation
Phytochrome: ME, metabolism
RNA, Messenger: GE, genetics
RNA, Messenger: ME, metabolism
Seeds: EN, enzymology
***Seeds: GE, genetics**
Seeds: GD, growth & development
Signal Transduction: GE, genetics
Signal Transduction: PH, physiology

RN 11121-56-5 (Phytochrome)
CN 0 (Gibberellins); 0 (RNA, Messenger); EC 1.- (Mixed Function Oxygenases); EC 1.14.99.- (gibberellin 3beta-hydroxylase)

L153 ANSWER 18 OF 33 MEDLINE on STN
ACCESSION NUMBER: 2002358866 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12102525
TITLE: Modelling kiwifruit budbreak as a function of temperature and bud interactions.
AUTHOR: Austin P T; Hall A J; Snelgar W P; Currie M J
CORPORATE SOURCE: HortResearch, Palmerston North Research Centre, New Zealand.. paustin@hortresearch.co.nz
SOURCE: Annals of botany, (2002 Jun) 89 (6) 695-706. Journal code: 0372347. ISSN: 0305-7364.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200208
ENTRY DATE: Entered STN: 20020710

Last Updated on STN: 20020813
Entered Medline: 20020812

ED Entered STN: 20020710
Last Updated on STN: 20020813
Entered Medline: 20020812

AB This paper presents two models of budbreak on canes of 'Hayward' kiwifruit (Actinidia deliciosa). A conventional 'chill unit' (CU) type model is compared with an alternative 'loss of potential' (LOP) approach, which assumes that the number of buds developing in spring depends on climate and node position-dependent bud-to-bud interactions that vary in duration and intensity. Both models describe how temperature, and application of a **dormancy-breaking** chemical, determine the overall amount of budbreak for whole canes. However, the LOP model does so by describing patterns of budbreak along canes. To do this, the cumulative influence of distal neighbours is assumed to cause a progressive fall in the capacity for bud development over the autumn-winter period, an influence that gets stronger as temperature rises. The LOP model also assumes that the rate of decline varies along the cane, as a function of some inherent bud property. These two factors mean that buds towards the base of the cane break less often under the suppressive influence of distal neighbours, while low temperature ('chilling') increases budbreak by diminishing the intensity of suppression relative to bud development rate. Under this scenario, **dormancy-breaking** chemicals (such as hydrogen cyanamide, HC) enhance budbreak by diminishing the duration of suppression. Models were calibrated using daily temperature series and budbreak proportion data from a multi-year regional survey, and were then tested against independent data sets. Both models were run from a fixed start date until the time budbreak was almost complete, or until a standard date. The fitted models described 87 % of variation in amount of budbreak due to site, year, HC and node position effects in the original data set. Results suggest that the correlation between chilling and the amount of budbreak **can** be interpreted as a population-based phenomenon based on interaction among buds.

CT Actinidia: DE, drug effects
*Actinidia: PH, physiology
Cyanamide: PD, pharmacology
Fruit: DE, drug effects
***Fruit: PH, physiology**
*Models, Biological
Plant Components: DE, drug effects
***Plant Components: PH, physiology**
Research Support, Non-U.S. Gov't
Temperature
Time Factors

RN 420-04-2 (Cyanamide)

L153 ANSWER 19 OF 33 MEDLINE on STN
ACCESSION NUMBER: 2003475782 MEDLINE
DOCUMENT NUMBER: PubMed ID: 14552358
TITLE: Anaerobic conditions improve germination of a gibberellic acid deficient rice.
AUTHOR: Frantz Jonathan M; Bugbee Bruce
CORPORATE SOURCE: Dep. of Plants, Soils, and Biometeorology, Utah State Univ., Logan, UT 84322-4820, USA.
SOURCE: Crop science, (2002 Mar-Apr) 42 (2) 651-4.
Journal code: 100955697. ISSN: 0011-183X.
(Investigators: Bugbee B G, UT St U, Logan) Report No.: NASA-00029815.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English
FILE SEGMENT: Space Life Sciences
ENTRY MONTH: 200311
ENTRY DATE: Entered STN: 20031014
Last Updated on STN: 20031219
Entered Medline: 20031121
ED Entered STN: 20031014
Last Updated on STN: 20031219
Entered Medline: 20031121
AB Dwarf **plants** are useful in research because multiple **plants can** be grown in a small area. Rice (Oryza sativa L.) is especially important since its relatively simple genome has recently been sequenced. We are characterizing a gibberellic acid (GA) mutant of rice (japonica cv 'Shiokari,' line N-71) that is extremely dwarf (20 cm tall). Unfortunately, this GA mutation is associated with poor germination (70%) under aerobic conditions. Neither exogenous GA nor a **dormancy-breaking** heat treatment improved germination. However, 95% germination was achieved by germinating the **seeds** anaerobically, either in a pure N2 environment or submerged in unstirred tap water. The anaerobic conditions appear to **break** a mild post-harvest **dormancy** in this rice cultivar.

ST NASA Discipline Life Sciences Technologies; Non-NASA Center
CT Check Tags: Comparative Study
Anaerobiosis
Germination: DE, drug effects
*Germination: PH, physiology
*Gibberellins: GE, genetics
Gibberellins: ME, metabolism
*Gibberellins: PD, pharmacology
Heat
Immersion
Mutation
Nitrogen
Oryza sativa: DE, drug effects
*Oryza sativa: GE, genetics
*Oryza sativa: GD, growth & development
Oryza sativa: ME, metabolism
Oxygen: ME, metabolism
Plant Growth Regulators: GE, genetics
Plant Growth Regulators: ME, metabolism
***Plant Growth Regulators: PD, pharmacology**
Research Support, Non-U.S. Gov't
Research Support, U.S. Gov't, Non-P.H.S.
Seeds
Triticum
Water
RN 77-06-5 (gibberellic acid); 7727-37-9 (Nitrogen); 7732-18-5 (Water); 7782-44-7 (Oxygen)
CN 0 (Gibberellins); 0 (**Plant** Growth Regulators)

L153 ANSWER 20 OF 33 MEDLINE on STN
ACCESSION NUMBER: 2002230992 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11968945
TITLE: **Breaking dormancy** is spores of the arbuscular mycorrhizal fungus Glomus intraradices: a critical cold-storage period.
AUTHOR: Juge Christine; Samson Julie; Bastien Claudia; Vierheilig Horst; Coughlan Andrew; Piche Yves
CORPORATE SOURCE: Centre de Recherche en Biologie Forestiere, Pavillon

C.-E.-Marchand, Universite Laval, Ste-Foy, Quebec G1K-7P4, Canada.. cjuge@rsvs.ulaval.ca
SOURCE: Mycorrhiza, (2002 Feb) 12 (1) 37-42.
Journal code: 100955036. ISSN: 0940-6360.
PUB. COUNTRY: Germany: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200302
ENTRY DATE: Entered STN: 20020424
Last Updated on STN: 20030204
Entered Medline: 20030203
ED Entered STN: 20020424
Last Updated on STN: 20030204
Entered Medline: 20030203
AB To elucidate the effect of cold storage on spore dormancy in the arbuscular mycorrhizal (AM) fungus Glomus intraradices, spores were cold stratified at 4 degrees C, for either 0, 3, 7, 14, 90 or 120 days, prior to germination tests at 25 degrees C. The results showed that cold stratification longer than 14 days significantly increased spore germination. Moreover, the longer cold storage periods clearly reduced spore mortality from 90% to 50% and considerably altered the hyphal growth pattern. Long polarized hyphae were only observed after cold stratification periods longer than 14 days, involving consequences for **root** infectivity. The results clearly show that environmental factors, e.g., coldness, **can** affect the physiology of AM fungal spores.
CT Cold
Hyphae: PH, physiology
*Mycorrhizae: PH, physiology
Refrigeration
Research Support, Non-U.S. Gov't
*Spores, Fungal: PH, physiology
*Zygomycota: PH, physiology

L153 ANSWER 21 OF 33 MEDLINE on STN
ACCESSION NUMBER: 2001236793 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11292078
TITLE: The stress- and abscisic acid-induced barley gene HVA22: developmental regulation and homologues in diverse organisms.
AUTHOR: Shen Q; Chen C N; Brands A; Pan S M; Ho T H
CORPORATE SOURCE: Department of Biology, Washington University, St. Louis, MO 63130, USA.
SOURCE: Plant molecular biology, (2001 Feb) 45 (3) 327-40.
Journal code: 9106343. ISSN: 0167-4412.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200105
ENTRY DATE: Entered STN: 20010517
Last Updated on STN: 20020420
Entered Medline: 20010503
ED Entered STN: 20010517
Last Updated on STN: 20020420
Entered Medline: 20010503
AB Abscisic acid (ABA) induces the expression of a battery of genes in mediating **plant** responses to environmental stresses. Here we report one of the early ABA-inducible genes in barley (Hordeum vulgare

L.), HVA22, which shares little homology with other ABA-responsive genes such as LEA (late embryogenesis-abundant) and RAB (responsive to ABA) genes. In grains, the expression of HVA22 gene appears to be correlated with the dormancy status. The level of HVA22 mRNA increases during grain development, and declines to an undetectable level within 12 h after imbibition of non-dormant grains. In contrast, the HVA22 mRNA level remains high in dormant grains even after five days of imbibition. Treatment of **dormant** grains with gibberellin (GA) effectively **breaks dormancy** with a concomitant decline of the level of HVA22 mRNA. The expression of HVA22 appears to be tissue-specific with the level of its mRNA readily detectable in aleurone layers and embryos, yet undetectable in the starchy endosperm. The expression of HVA22 in vegetative tissues **can** be induced by ABA and environmental stresses, such as cold and drought. Apparent homologues of this barley gene are found in phylogenetically divergent eukaryotic organisms, including cereals, Arabidopsis, Caenorhabditis elegans, man, mouse and yeast, but not in any prokaryotes. Interestingly, similar to barley HVA22, the yeast homologue is also stress-inducible. These observations suggest that the HVA22 and its homologues encode a highly conserved stress-inducible protein which may play an important role in protecting cells from damage under stress conditions in many eukaryotic organisms.

CT *Abscisic Acid: PD, pharmacology
Amino Acid Sequence
Base Sequence
Blotting, Northern
Casein Kinase II
Cereals: GE, genetics
Conserved Sequence
Cyclopentanes: PD, pharmacology
Gene Expression Regulation, Developmental: DE, drug effects
Gene Expression Regulation, Fungal: DE, drug effects
Gene Expression Regulation, Plant: DE, drug effects
***Genes, Structural, Plant: GE, genetics**
Gibberellins: PD, pharmacology
*Hordeum: GE, genetics
Molecular Sequence Data
Phosphorylation
Plant Proteins: GE, genetics
Plant Proteins: ME, metabolism
Promoter Regions (Genetics): GE, genetics
Protein-Serine-Threonine Kinases: ME, metabolism
RNA, Messenger: DE, drug effects
RNA, Messenger: GE, genetics
RNA, Messenger: ME, metabolism
Research Support, Non-U.S. Gov't
Research Support, U.S. Gov't, Non-P.H.S.
Saccharomyces cerevisiae: GE, genetics
Seeds: GE, genetics
Seeds: GD, growth & development
Sequence Alignment
Sequence Homology, Amino Acid
Sodium Chloride: PD, pharmacology
Tissue Distribution
Transcription, Genetic
Up-Regulation: DE, drug effects

RN 21293-29-8 (Abscisic Acid); 6894-38-8 (jasmonic acid); 7647-14-5 (Sodium Chloride); 77-06-5 (gibberellic acid)

CN 0 (Cyclopentanes); 0 (Gibberellins); 0 (**Plant** Proteins); 0 (RNA, Messenger); EC 2.7.1.37 (Casein Kinase II); EC 2.7.1.37 (Protein-Serine-Threonine Kinases)

L153 ANSWER 22 OF 33 MEDLINE on STN
ACCESSION NUMBER: 2000144008 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10677434
TITLE: Gibberellin requirement for Arabidopsis **seed** germination is determined both by testa characteristics and embryonic abscisic acid.
AUTHOR: Debeaujon I; Koornneef M
CORPORATE SOURCE: Laboratory of Genetics, Wageningen University, Dreijenlaan 2, 6703 HA Wageningen, The Netherlands.
SOURCE: Plant physiology, (2000 Feb) 122 (2) 415-24.
Journal code: 0401224. ISSN: 0032-0889.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200003
ENTRY DATE: Entered STN: 20000407
Last Updated on STN: 20000407
Entered Medline: 20000324

ED Entered STN: 20000407
Last Updated on STN: 20000407
Entered Medline: 20000324

AB The mechanisms imposing a gibberellin (GA) requirement to promote the germination of dormant and non-dormant Arabidopsis **seeds** were analyzed using the GA-deficient mutant ga1, several **seed** coat pigmentation and structure mutants, and the abscisic acid (ABA)-deficient mutant aba1. Testa mutants, which exhibit reduced **seed** dormancy, were not resistant to GA biosynthesis inhibitors such as tetcyclacis and paclobutrazol, contrarily to what was found before for other non-dormant mutants in Arabidopsis. However, testa mutants were more sensitive to exogenous GAs than the wild-types in the presence of the inhibitors or when transferred to a GA-deficient background. The germination capacity of the ga1-1 mutant could be integrally restored, without the help of exogenous GAs, by removing the envelopes or by transferring the mutation to a tt background (tt4 and ttg1). The double mutants still required light and chilling for **dormancy breaking**, which may indicate that both agents **can** have an effect independently of GA biosynthesis. The ABA biosynthesis inhibitor norflurazon was partially efficient in releasing the dormancy of wild-type and mutant **seeds.** These results suggest that GAs are required to overcome the germination constraints imposed both by the **seed** coat and ABA-related embryo dormancy.

CT Abscisic Acid: AI, antagonists & inhibitors
Abscisic Acid: BI, biosynthesis
*Abscisic Acid: ME, metabolism
*Arabidopsis: EM, embryology
Arabidopsis: GE, genetics
*Germination: PH, physiology
Gibberellins: AI, antagonists & inhibitors
Gibberellins: BI, biosynthesis
*Gibberellins: ME, metabolism
Mutation
Pyridazines: PD, pharmacology
Research Support, Non-U.S. Gov't
Seeds: ME, metabolism
***Seeds: PH, physiology**

RN 21293-29-8 (Abscisic Acid); 27314-13-2 (norflurazone)
CN 0 (Gibberellins); 0 (Pyridazines)

L153 ANSWER 23 OF 33 MEDLINE on STN
ACCESSION NUMBER: 2001039084 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10982438
TITLE: An increase in pectin methyl esterase activity accompanies **dormancy breakage** and germination of yellow cedar **seeds.**
AUTHOR: Ren C; Kermode A R
CORPORATE SOURCE: Department of Biological Sciences, Simon Fraser University, 8888 University Drive, Burnaby, British Columbia, Canada V5A 1S6.
SOURCE: Plant physiology, (2000 Sep) 124 (1) 231-42.
Journal code: 0401224. ISSN: 0032-0889.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200011
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20001124

ED Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20001124

AB Pectin methyl esterase (PME) (EC 3.1.1.11) catalyzes the hydrolysis of methylester groups of cell wall pectins. We investigated the role of this enzyme in **dormancy termination** and germination of yellow cedar (Chamaecyparis nootkatensis [D. Don] Spach) **seeds.** PME activity was not detected in dormant **seeds** of yellow cedar but was induced and gradually increased during moist chilling; high activity coincided with **dormancy breakage** and germination. PME activity was positively correlated to the degree of **dormancy breakage** of yellow cedar **seeds.** The enzyme produced in different **seed** parts and in **seeds** at different times during moist chilling, germination, and early post-germinative growth consisted of two isoforms, both basic with isoelectric points of 8.7 and 8.9 and the same molecular mass of 62 kD. The pH optimum for the enzyme was between 7.4 and 8.4. In intact yellow cedar **seeds**, activities of the two basic isoforms of PME that were induced in embryos and in megagametophytes following **dormancy breakage** were significantly suppressed by abscisic acid. Gibberellic acid had a stimulatory effect on the activities of these isoforms in embryos and megagametophytes of intact **seeds** at the germinative stage. We hypothesize that PME plays a role in weakening of the megagametophyte, allowing radicle emergence and the completion of germination.

CT Abscisic Acid: ME, metabolism
*Carboxylic Ester Hydrolases: ME, metabolism
Cold
Electrophoresis: MT, methods
Enzyme Stability
*Germination
Gibberellins: ME, metabolism
Heat
Hydrogen-Ion Concentration
Isoenzymes: ME, metabolism
***Plant Proteins: ME, metabolism**
Research Support, Non-U.S. Gov't
Seeds: EN, enzymology
Seeds: GD, growth & development
***Seeds: ME, metabolism**

Trees: EN, enzymology
Trees: GD, growth & development
***Trees: ME, metabolism**
RN 21293-29-8 (Abscisic Acid); 77-06-5 (gibberellic acid)
CN 0 (Gibberellins); 0 (Isoenzymes); 0 (**Plant** Proteins); EC 3.1.1 (Carboxylic Ester Hydrolases); EC 3.1.1.11 (pectinesterase)

L153 ANSWER 24 OF 33 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 2001:558406 BIOSIS
DOCUMENT NUMBER: PREV200100558406
TITLE: Light, nitrogenous compounds, smoke and GA3 **break dormancy** and enhance germination in the Australian everlasting daisy, Shoenia filifolia subsp. subulifolia.
AUTHOR(S): Plummer, J. A. [Reprint author]; Rogers, A. D. [Reprint author]; Turner, D. W.; Bell, D. T.
CORPORATE SOURCE: Plant Sciences, Faculty of Agriculture, University of Western Australia, 35 Stirling Hwy, Crawley, WA, 6009, Australia
jplummer@cyllene.uwa.edu.au
SOURCE: Seed Science and Technology, (2001) Vol. 29, No. 2, pp. 321-330. print.
CODEN: SSTCBK. ISSN: 0251-0952.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 5 Dec 2001
Last Updated on STN: 25 Feb 2002
ED Entered STN: 5 Dec 2001
Last Updated on STN: 25 Feb 2002
AB Shoenia filifolia subsp. subulifolia (F.Muell.) Wilson has an innate dormancy period that prevents germination during summer thundershower events. High-temperature dry storage or applications of **nitrate** or gibberellic acid (GA3) shortened the required after-ripening period. Combinations of KNO3 and GA3 had an additive effect on germination. In addition to KNO3, Ca(NO3)2 and K3 (Fe(CN)6) also increased germination percentages. However, NH4Cl, KNO2, NaN3 and a 1% concentration of smoke water (Kings Park and Botanic Garden Smoky **Seed** Starter) showed no stimulatory effect on germination in this arid-zone ephemeral. The solution of combustion products did not affect 27 week-old **seeds** when grown in the light, but the light requirement tended to be overcome by gradually increasing concentrations of smoke water. The after-ripening requirement, **nitrate**, GA and the Pfr form of phytochrome may be linked in Shoenia filifolia subsp. subulifolia via their association with cellular membranes. The capacity of smoke water to also stimulate germination in the dark may indicate that the active ingredient in smoke could be a nitrous oxide-generating compound. **Seeds** with sufficient levels of GA to sense light and/or increased levels of water-soluble nitrogenous compounds **can** germinate with the first winter rains in open-soil sites of this Mediterranean-climate region of Western Australia.
CC Biochemistry studies - General 10060
Development and Embryology - General and descriptive 25502
Plant physiology - Growth, differentiation 51510
Plant physiology - Growth substances 51514
Plant physiology - Chemical constituents 51522
IT Major Concepts
Development
IT Chemicals & Biochemicals
ammonium chloride; gibberellic acid: phytohormone; nitrogenous compounds; nitrous oxide; **potassium**

nitrate; potassium nitrogen dioxide; smoke water [Kings Park and Botanic Garden Smoky **Seed** Starter]; sodium azide; triphosphate iron hexacyanide
IT Miscellaneous Descriptors
Mediterranean climate; light; **seed dormancy breakage**; **seed** germination; smoke
GT Western Australia (Australia, Australasian region)
ORGN Classifier
Compositae 25840
Super Taxa
Dicotyledones; Angiospermae; Spermatophyta; **Plantae**
Organism Name
Shoenia filifolia ssp. subulifolia [Australian everlasting daisy, yellow strawflower]
Taxa Notes
Angiosperms, Dicots, **Plants**, Spermatophytes, Vascular **Plants**
RN 12125-02-9 (**ammonium** chloride)
77-06-5 (gibberellic acid)
10024-97-2 (nitrous oxide)
7757-79-1 (potassium nitrate)
26628-22-8 (sodium azide)

L153 ANSWER 25 OF 33 CABA COPYRIGHT 2005 CABI on STN
ACCESSION NUMBER: 2003:141209 CABA
DOCUMENT NUMBER: 20033108970
TITLE: Effects of temperature and several chemicals on metabolic changes during **dormancy** release in NJ72 nectarine
AUTHOR: Yuan ZhiYou; Li XianLi; Li LingHao; Han XingGuo; Yan TianLi; Yuan, Z. Y.; Li, X. L.; Li, L. H.; Han, X. G.; Yan, T. L.
CORPORATE SOURCE: Laboratory of Quantitative Vegetation Ecology, Institute of Botany, The Chinese Academy of Sciences, Beijing 100093, China. zyyuan@ns.ibcas.ac.cn; xlli@sdau.edu.cn
SOURCE: Agricultural Sciences in China, (2003) Vol. 2, No. 5, pp. 549-555. 25 ref.
Publisher: Editorial Department of Agricultural Sciences in China. Beijing
ISSN: 1671-2927
PUB. COUNTRY: China
DOCUMENT TYPE: Journal
LANGUAGE: English
ENTRY DATE: Entered STN: 20030916
Last Updated on STN: 20030916
ED Entered STN: 20030916
Last Updated on STN: 20030916
AB The effect of temperature and chemicals on the metabolic changes in 2-year-old nectarine (Prunus persica cv. NJ72) during dormancy release was investigated. The **plants** were transferred from the field to the glasshouse (10-22[deg]C) and artificial chamber (25 and 4[deg]C). **Plants** were sprayed with 2% (NH2)2CS, 6% KNO5 and 5% NH4NO3. Results showed that the temperature and chemical affected the **budbreak** of nectarine during dormancy. The endogenous peroxide content in **buds** increased soon after low temperature treatment. Catalase activity also increased under low temperature, coinciding with the increase in peroxidase and superoxide dismutase activities. Respiration rate in **flower buds** increased under low temperature treatment during dormancy. Under the same condition, the rate

of the pentose phosphate pathway increased, that of the Embden-Meyerhof pathway decreased and that of tricarboxylic acid pathway slightly increased. Glucose-6 phospate dehydrogenase activity increased at low temperature during dormancy, and peroxide accumulated in the **plant** after treatment with **dormancy breaking** chemicals. Catalase activity was inhibited while peroxidase activity increased in chemical-treated **flowers**, while the activity of superoxide dismutase remained the same.

L153 ANSWER 26 OF 33 CABA COPYRIGHT 2005 CABI on STN
ACCESSION NUMBER: 2003:166256 CABA
DOCUMENT NUMBER: 20033142776
TITLE: Postharvest quality of 'Bing' cherries following preharvest treatment with hydrogen cyanamide, **calcium ammonium nitrate**, or gibberellic acid
AUTHOR: Clayton, M.; Biasi, W. V.; Agar, I. T.; Southwick, S. M.; Mitcham, E. J.
CORPORATE SOURCE: Department of Pomology, University of California, One Shields Ave., Davis, CA 95616, USA.
SOURCE: HortScience, (2003) Vol. 38, No. 3, pp. 407-411. 15 ref.
Publisher: American Society for Horticultural Science. Alexandria
ISSN: 0018-5345
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal
LANGUAGE: English
ENTRY DATE: Entered STN: 20031003
Last Updated on STN: 20031003
ED Entered STN: 20031003
Last Updated on STN: 20031003
AB During three consecutive years, 'Bing' sweet cherry (Prunus avium) **trees** were treated during dormancy with the dormancy-manipulating compounds, CH2N2 or CaNH4NO3, or were treated with the **plant** growth regulator GA3 at straw colour development (salmon, red, mahogany and dark mahogany). **Fruits** of a range of maturities, based on skin colour, were evaluated for quality following harvest and simulated transit and market storage conditions. At comparable maturities, CH2N2 and GA3 **fruits** were of similar firmness and were consistently firmer than CaNH4NO3-treated and untreated **fruit** across years, storage regimes, and maturities. CaNH4NO3 and untreated **fruits** were of similar firmness. CH2N2-treated cherries were larger than **fruits** of other treatments, but only marginally in terms of variation in **fruit** size between years. Contraction of **fruit** diameter occurred after 3 days storage, but ceased thereafter up to 11 days storage. Soluble solids and titratable acidity varied between years, storage regimes, and maturities. Strong interactions of treatment and year concealed possible treatment effects on these indices. GA3 **fruit** contained fewer surface pits in one year while CH2N2 **fruit** suffered less shrivel in another. The earlier harvest date for CH2N2 **fruit** often avoided higher field temperatures and the resulting promotion of postharvest shrivel. Pitting and shrivel were more prevalent in stored **fruit.** Brown stem discoloration developed in storage, occurring most frequently in mature **fruits**, although methyl bromide-fumigated **fruit** were particularly susceptible. This disorder was more common in GA3 **fruit** during years of high incidence.

L153 ANSWER 27 OF 33 CABA COPYRIGHT 2005 CABI on STN

ACCESSION NUMBER: 2003:109894 CABA
DOCUMENT NUMBER: 20033080200
TITLE: Innovative production systems for non-astringent persimmon
AUTHOR: George, A. P.; Nissen, R. J.; Mowat, A.; Collins, R. J.; Collins, R. [EDITOR]
CORPORATE SOURCE: Maroochy Research Station, Queensland Horticulture Institute, PO Box 5083, SCMC, Nambour 4560, Australia. amowat@hort.cri.nz
SOURCE: Acta Horticulturae, (2003) No. 601, pp. 151-157. 23 ref.
Publisher: International Society for Horticultural Science (ISHS). Leuven
Price: Journal article; Conference paper ; 62 EURO
Meeting Info.: Proceedings of the Second International Persimmon Symposium, Queensland, Australia, 10-13 September, 2000.
ISSN: 0567-7572; ISBN: 90-6605-926-5
PUB. COUNTRY: Belgium
DOCUMENT TYPE: Journal
LANGUAGE: English
ENTRY DATE: Entered STN: 20030707
Last Updated on STN: 20030707

ED Entered STN: 20030707
Last Updated on STN: 20030707

AB Traditional production systems for growing non-astringent persimmon throughout the world have changed rapidly in the last 10 years. New systems have been developed to grow persimmon in subtropical regions of the world. In Australia, most orchards are now trained to a palmette system rather than the conventional vase shape system, allowing for easier management and growth control. In contrast, in New Zealand, trees are trained to a Y trellis system to improve light interception under cloudy growing conditions. Reflective mulch is also used to further maximize the light use and increase fruit heat units necessary to fully mature the fruit. Tree planting densities have increased from 400 to 800 trees per hectare. In Japan, high density plantings using micro-propagated trees are being evaluated. In Australia many orchards are netted to exclude birds and fruit eating bats. Multi-purpose fruit fly exclusion netting is also being evaluated as an environmentally friendly alternative to insecticidal cover sprays. New formulations of fruit fly bait sprays with greater efficacy and longer field life have also been developed. Sporadic and erratic budbreak **can** be a major problem in subtropical regions where trees do receive sufficient chilling. A new range of **rest-breaking** chemicals such as **Armobreak** (akolated amine) and Waiken (fatty acid esters) **can** increase the percentage budbreak, flowering and yield. Excessive vegetative growth during the flowering period leads to competing sinks, reducing fruit set and fruit size. The growth retardant paclobutrazol has been shown to effectively control growth reducing tree size by about 20%. Paclobutrazol also advanced the harvest period by about 2 weeks without loss of fruit quality or storage life. Attempts at improving fruit firmness and post-harvest shelf life through foliar application of Ca have been partially successful but multiple sequential applications are necessary to be effective. Preliminary studies have shown that a new group of growth regulators, ethylene biosynthesis inhibitors, when applied 2 to 3 weeks prior to harvest, delayed fruit maturity and improved fruit size, firmness and storage life.

L153 ANSWER 28 OF 33 CABA COPYRIGHT 2005 CABI on STN
ACCESSION NUMBER: 2002:209474 CABA

DOCUMENT NUMBER: 20023161122
TITLE: Effects of new **rest-breaking** chemicals on flowering, shoot production and yield of subtropical tree crops
AUTHOR: George, A. P.; Broadley, R. H.; Nissen, R. J.; Ward, G.; Drew, R. [EDITOR]
CORPORATE SOURCE: Queensland Horticulture Institute, Maroochy Research Station, PO Box 5083, SCMC, Nambour Q4560, Australia.
SOURCE: Acta Horticulturae, (2002) No. 575(Vol. 2), pp. 835-840. 17 ref.
Publisher: International Society for Horticultural Science (ISHS). Leuven
Price: Journal article; Conference paper ; 150 EURO (both volumes)
Meeting Info.: Proceedings of the International Symposium on Tropical and Subtropical Fruits, Cairns, Northern Territory, Australia, 26 November to 1 December 2000, volume 2.
ISSN: 0567-7572; ISBN: 90-6605-885-4
PUB. COUNTRY: Belgium
DOCUMENT TYPE: Journal
LANGUAGE: English
ENTRY DATE: Entered STN: 20021206
Last Updated on STN: 20021206

ED Entered STN: 20021206
Last Updated on STN: 20021206

AB Chilling, or the alleviation of drought, is required to cause the transition of both vegetative and floral buds of temperate or semi-deciduous subtropical fruit species from the dormant to active state. The chilling requirement of the variety must closely match the amount of chilling received at the location otherwise the variety will exhibit signs of lack of chilling such as sporadic budbreak and uneven shoot development along branches. Several experiments were conducted in southeast Queensland, Australia, to determine whether various combinations of new **rest-breaking** chemicals (Dormex (hydrogen cyanamide), **Armobreak** (alkolated amine), Waiken (fatty acid esters), gibberellic acid) could induce more uniform budbreak and increase flowering of a range of low-chill temperate and subtropical species (low-chill stone fruit, persimmon and custard apple [Annona reticulata]). These experiments demonstrated the beneficial effects of using **rest-breaking** chemicals to **break dormancy**, advance flowering and fruit maturity, and increase lateral number by reducing strong apical dominance. The most successful **rest-breaking** chemicals were **Armobreak** and Waiken but only when combined with **potassium nitrate** which greatly improved their efficacy by 20-30%. Compared with Dormex, these combinations appear to have relatively low mammalian toxicity and phytotoxicity increasing their potential for safe commercial use. Further testing on a wider range of species/varieties and environments are needed to determine the optimum concentrations and timing.

L153 ANSWER 29 OF 33 CABA COPYRIGHT 2005 CABI on STN
ACCESSION NUMBER: 2002:60347 CABA
DOCUMENT NUMBER: 20013152617
TITLE: A comparative study on the behaviour of **dormant** and non-**dormant** corm segments of gladiolus cv. 'Peter Pears' to initiate calli and develop **shoots** in vitro
AUTHOR: Hosni, A. M.

CORPORATE SOURCE: Department of Horticulture, Faculty of Agric., Ain Shams Univ., Shoubra El-Kheima, Cairo 11241, Egypt.
SOURCE: Arab Universities Journal of Agricultural Sciences, (2001) Vol. 9, No. 2, pp. 853-865. 15 ref.
Publisher: Faculty of Agriculture, Ain Shams University. Cairo
ISSN: 1110-2675
PUB. COUNTRY: Egypt
DOCUMENT TYPE: Journal
LANGUAGE: English
SUMMARY LANGUAGE: Arabic
ENTRY DATE: Entered STN: 20020405
Last Updated on STN: 20020405
ED Entered STN: 20020405
Last Updated on STN: 20020405
AB Laboratory experiments were conducted to determine the potential of Gladiolus hortulens cv. Peter Pears corms to produce calluses and **shoots** in vitro when stored in dormant (5[deg]C for 60 days) and non-dormant conditions (30[deg] for 60 days). The cultures were grown in 3 different mediums namely: MS (half-strength NH4NO3)+10 mg/litre NAA+0.5 mg/litre kinetin, MS (standard strength NH4NO3)+10 mg/litre NAA+0.5 mg/litre kinetin, and MS (standard strength NH4NO3)+0.5 mg/litre benzyladenine (BAP). Two tests (sprouting test and triphenyl tetrazolium chloride (TTC) test) were conducted to confirm the dormancy or no-dormancy states. Explant corm tissues initiated callus production when cultured on medium deprived of auxin and supplemented with 0.5 mg/litre BAP regardless of dormancy or no-dormancy states. Decreased levels of NH4NO3 promoted callus formation in the dormant corm segments. **Root** initiation was observed when the calluses where transferred to culture medium supplemented with 10 mg/litre NAA and 0.5 mg/litre kinetin. **Shoots** developed in the medium supplemented with 0.5 mg/litre BAP. The state of dormancy had no significant effect on almost all the parameters except percentage of explants producing cultures.

L153 ANSWER 30 OF 33 CABA COPYRIGHT 2005 CABI on STN
ACCESSION NUMBER: 2000:115936 CABA
DOCUMENT NUMBER: 20000312665
TITLE: Preliminary results for the evaluation of new **rest breaking** agents on table **grapes** in South Africa
AUTHOR: Lombard, P. J.; Viljoen, J. A.; Wolf, E. E. H.; Bodson, M. [EDITOR]; Verhoyen, M. N. J. [EDITOR]
CORPORATE SOURCE: ARC-Fruit, Vine and Wine Research Institute, Private Bag X 5026, Stellenbosch, 7599, South Africa.
SOURCE: Acta Horticulturae, (2000) No. 514, pp. 99-112. 16 ref.
Price: Conference paper; Journal article
Meeting Info.: Proceedings of the XXV International Horticultural Congress. Part 4. Culture techniques with special emphasis on environmental implications: chemical, physical and biological means of regulating crop growth in vegetables and fruits, Brussels, Belgium, 2-7 August, 1998.
ISSN: 0567-7572; ISBN: 90-6605-783-1
DOCUMENT TYPE: Journal
LANGUAGE: English
ENTRY DATE: Entered STN: 20001006
Last Updated on STN: 20001006
ED Entered STN: 20001006
Last Updated on STN: 20001006

AB **Rest breaking** agents play an important role in the production of table **grapes** in South Africa. The use of such agents is often associated with uneven **budburst**, decreased fertility and poor bunch quality. Hydrogen cyanamide (Dormex) is the main **rest breaking** agent registered for use on vines. Three trials were initiated in 2 Sultanina clone H5 vineyards in the Augrabies and Kakamas areas of the Lower Orange River region of South Africa. The effects of GAN (**urea ammonium nitrate** and **calcium nitrate**) and various adjuvants (ACAR 92038 (**Armobreak**) and ACAR 97S21) and application time on **dormancy breaking** was investigated in comparison with hydrogen cyanamide treatment. Although the standard cyanamide treatment induced **budburst** earlier than GAN, treatments did not differ regarding yield, quality and bunch ripeness at harvest. GAN, in combination with the adjuvants, was most effective when applied 4.5 weeks before expected **budburst**. Climatic conditions before **budburst** in the 1996-97 season were normal, but unseasonably cold and wet between **budburst** and harvest. In 1997-98, conditions were cooler before **budburst**, but dry and warm until harvest. GAN is an effective **dormancy breaker** of table **grapes** when used in conjunction with the adjuvants tested.

=> d l153 iall abeq tech abex 31
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, MEDLINE, BIOSIS, CABA, PASCAL, WPIX' -
CONTINUE? (Y)/N:y

L153 ANSWER 31 OF 33 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 2005-252711 [26] WPIX
DOC. NO. CPI: C2005-080045
TITLE: Use of cyclopropene derivative for inhibiting ethylene response in e.g. ripening or senescence of flowers, fruits, and vegetables in plant.
DERWENT CLASS: C01 C02
INVENTOR(S): EVANS, K A; JACOBSON, R M; KELLY, M J; WEHMEYER, F L
PATENT ASSIGNEE(S): (EVAN-I) EVANS K A; (JACO-I) JACOBSON R M; (KELL-I) KELLY M J; (WEHM-I) WEHMEYER F L
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 2005065033	A1	20050324	(200526)*		35	A01N025-26

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 2005065033	A1	US 2003-645431	20030821

PRIORITY APPLN. INFO: US 2003-645431 20030821
INT. PATENT CLASSIF.:
MAIN: A01N025-26
SECONDARY: A01N035-00; A01N035-10; A01N047-40
BASIC ABSTRACT:
US2005065033 A UPAB: 20050422
NOVELTY - Inhibition of an ethylene response in a plant comprises

contacting the plant with a cyclopropene derivative (I), its enantiomers, stereoisomers, and/or salts or a composition containing (I).

DETAILED DESCRIPTION - Inhibition of an ethylene response in a plant comprises contacting the plant with a cyclopropene derivative of formula (I), its enantiomers, stereoisomers, and/or salts or a composition containing (I).

R1 - R4 = H or -(L)n-Z;

n = 1 - 12;

L = D1, D2, E or J;

D1 = -C(X)(Y)-, -C(=O)-, -C(=S)-, -C(=C(X)(Y))-, -C(=N-X)- or -C(X)=C(Y)-;

D2 = -O-, -N+(X)(Y)-, -N(X)-, -N(O)=C-, -C(X)=N(O)-, -N=C(X)- or -C(X)=N-;

E = -Si(X)-, -S-, -S(=O)-, -S(=NX)-, -S(O)2-, -S(=NX)(=O)-, -S(=NX)(=NY)-, -Si(NX)(NY)-, -P+(X)(Y)-, -B-(X)(Y)-, -B(X)-, -P(X)-, -P+(X)(Y)-, -P(=S)(X)- or -P(=O)(X)-;

J = -N=N-, -N(O)=N-, -N=N(O)-, -N=C=N-, -C(X)=C=C(Y)- or -C equivalent to C-;

X, Y = -(L)m-Z;

m = 0 - 8;

Z = H, halo, cyano, nitro, nitroso, azido, chlorate, bromate, iodate, isocyanato, isocyanido, isothiocyanato or pentafluorothio or G;

G = optionally substituted (un)saturated or partially saturated mono-, bi- or tricyclic or fused 4-14-membered carbocyclic or heterocyclic ring; and .

provided that:

(i) one of R1 and R3 is H, and R2, R4 and the other of R1 and R3 are H or -(L)n-Z;

(ii) no more than two D2 or E groups are adjacent to each other and no J groups are adjacent to each other;

(iii) In Z, when the ring contains a 4 membered heterocyclic ring, it contains 1 heteroatom, when the ring contains at least 5-membered heterocyclic or polycyclic ring, it contains 1 - 4 heteroatoms where each heteroatom is N, O and S and the number of substituents is 0 - 5 and each substituent is X;

(iv) the total number of non-hydrogen atoms in each compound is at most 50; and

(v) either R1 or R3 contains at least one group G, at least one L group is an E group, or at least one of R1-R4 contains more than 4 non-hydrogen atoms.

An INDEPENDENT CLAIM is also included for a new cyclopropene derivative of formula (II), provided that:

(a) -(L)n-Z is other than trimethylsilyl, trimethylsilylsulfonyl or thiol;

(b) R1 is other than phenylsulfonyl, phenylthioethyl, diphenylhydroxymethyl, benzo(g)quinolin-7-ol-1-methyl, a malonate derivative, a substituted 3-aminocyclohexanone or dialkoxybenzylaminocarbonyl; and

(c) R3 is other than 2-phenyl-ethenyl, phenylthio, (4-bromo-2-methylphenyl)carbamic acid N-carbonyl, (4-bromo-2-methylphenyl)carbamic acid ethyl ester N-carbonyl, a malonate derivative, aryloxy or dialkoxybenzylaminocarbonyl.

ACTIVITY - Plant growth inhibitor; Plant growth stimulator; Seed germination inhibitor.

MECHANISM OF ACTION - Ethylene response inhibitor.

The ability of 1-(4-chlorophenylmethyl)-cyclopropene (A) to block the epinastic growth response induced by ethylene in tomato plants was determined by using tomato epinasty test when (A) (10 ppm) was administered either as a volatile gas or as a component of a spray solution. Test plants were Patio variety tomato, and seedlings were

planted two plants per three inch square plastic pot. Volatile gas treatment included placing two pots of Patio variety tomatoes into a polystyrene volume (4.8 l) treatment chamber along with one-half of a 50 multiply 9 mm plastic Petri dish. (A) dissolved in acetone (1 ml), was pipetted onto the filter pad and the chamber immediately sealed. Four hours later ethylene gas (10 ppm vol/vol) was injected into the sealed chamber. Sixteen hours later the chambers were opened in an exhaust hood, allowed to air and the plants scored visually for the degree of protection against ethylene-induced epinasty conferred by (A) when compared to ethylene treated and untreated controls. (A) Provided complete protection.

USE - For inhibiting an ethylene response in plants, e.g. ripening or senescence of flowers, fruits, and vegetables; abscission of foliage, flowers, and fruit; the shortening of life of ornamental plants, cut flowers, shrubbery, seeds, or dormant seedlings; inhibition of growth; stimulation of growth; auxin activity; inhibition of terminal growth; control of apical dominance; increase in branching; increase in tillering; changing the morphology of plants, modifying the susceptibility to plant pathogens e.g. fungi, changing bio-chemical compositions; abortion or inhibition of flowering or seed development; lodging effects; stimulation of seed germination; **breaking** of **dormancy**; hormone effects; and/or epinasty effects (claimed).

ADVANTAGE - The derivative blocks the ethylene response, inhibits abscission in a plant, prolongs the life of a cut flower and inhibits the ripening of a picked fruit or vegetable. The compounds are potent inhibitors of ethylene action on plants, fruits and vegetables, even when applied at low concentrations.

Dwg.0/0

FILE SEGMENT: CPI
FIELD AVAILABILITY: AB; GI; DCN
MANUAL CODES: CPI: C05-B01B; C06-H; C07-H; C10-A10; C10-B01; C10-B02; C10-B03; C10-B04; C10-E03; C10-E04; C10-F01; C10-F02; C10-G02; C10-H01; C10-H02; C14-L06; C14-U01; C14-U01C; C14-U01E

TECH UPTX: 20050422

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preparation: (I) Is prepared as given in Closs, G. L. Advan. Alicyclic Chem. 1966, 1, 53-127.

ABEX UPTX: 20050422

ADMINISTRATION - The derivative can be applied by spraying in a concentration of 0.01 - 1000 ppm.

EXAMPLE - To a solution of 1-(2-bromo-allyl)-4-chloro-benzene in bromoform (20 ml) was added **tetrabutylammonium** bromide (0.686 g). After heating to 58.5 degrees C for an hour, 50% aqueous sodium hydroxide (10.7 ml) was added. This was repeated seven times over two days. After cooling to room temperature, hexane and water were added. The mixture was gravity filtered. The resulting mixture was transferred to a separatory funnel and the phases were separated. The organic layer was dried and filtered. The solvent was removed from the filtrate and the residue was purified to give 2-(4-chlorophenylmethyl)-1,1,2-tribromocyclopropane (2.3 g). A solution of 2-(4-chlorophenylmethyl)-1,1,2-tribromocyclopropane (1.2 g) in diethyl ether (6 ml) was placed under a nitrogen atmosphere. While cooling in an ice water bath, 1.4 M methyl lithium (6.38 ml) in diethyl ether was added slowly. After 15 minutes, water (2 ml) was added. The resulting mixture was transferred to a separatory funnel and the phases were separated. The organic layer was dried and filtered. The solvent was removed from the filtrate with a bath temperature of 20 degrees C to yield 0.43 g of 1-(4-chlorophenylmethyl)-cyclopropene (A) as an oil.

DEFINITIONS - Preferred Definitions:
n = 1 - 7;

m = 0 - 2;
D1 = -CXY-, -CO, or -CS-;
D2 = -NX- or -O-;
E = -S-, -SiXY- or -SO2;
X,Y = H, halo, OH, SH, -C(O)1-4C alkyl, -O-1-4C alkyl, -S-1-4C alkyl or optionally substituted 1-4C alkyl;
G = phenylpyridyl, cyclohexyl, cyclopentyl, pyrrolyl, furyl, thiophenyl, triazolyl, pyrazolyl, 1,3-dioxolanyl or morpholinyl (all optionally mono- to tri-substituted by methyl, methoxy or halo); and
R2-R4 = H; or
R1-R3 = H.

=> d l153 ibib ed ab hit 32-
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, MEDLINE, BIOSIS, CABA, PASCAL, WPIX' - CONTINUE? (Y)/N:y

YOU HAVE REQUESTED DATA FROM 2 ANSWERS - CONTINUE? Y/(N):y

L153 ANSWER 32 OF 33 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 2004-0586860 PASCAL
COPYRIGHT NOTICE: Copyright .COPYRGT. 2004 INIST-CNRS. All rights reserved.
TITLE (IN ENGLISH): Nitrogen uptake by four tree species of the Catskill Mountains, New York: Implications for forest N dynamics
AUTHOR: TEMPLER P. H.; DAWSON T. E.
CORPORATE SOURCE: Department of Ecology and Evolutionary Biology, Cornell University, Ithaca, New York 14853, United States; Center for Stable Isotope Biogeochemistry and the Department of Integrative Biology, University of California, Berkeley, CA 94720, United States
SOURCE: Plant and soil, (2004), 262(1-2), 251-261, refs. 1 p.1/4
ISSN: 0032-079X CODEN: PLSOA2
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: Netherlands
LANGUAGE: English
AVAILABILITY: INIST-4772, 354000120191480220
UP 20041206
AB Watersheds of the Catskill Mountains, New York have marked differences in nitrogen (N) dynamics among dominant tree species stands. Our objectives were to study how tree species vary in N uptake to better understand the basis for the observed variation in these forested watersheds. We conducted a .sup.1.sup.5N tracer greenhouse study to determine NH.sup.+.sub.4 and NO.sup.-.sub.3 uptake of American beech (Fagus grandifolia Ehrh.), eastern hemlock (Tsuga Canadensis L.), red oak (Quercus rubra L.) and sugar maple (Acer saccharum Marsh.) seedlings. Seedlings and their native soil were collected in November 1997, over-wintered and allowed to **break dormancy** in spring 1998. Half of the seedlings of each tree species received .sup.1.sup.5NH.sub.4-NO.sub.3 to examine NH.sup.+.sub.4 uptake and the other half received NH.sub.4-.sup.1.sup.5NO.sub.3 to examine NO.sup.-.sub.3 uptake. Plants were harvested 4 days following .sup.1.sup.5N addition.[...]
AB Watersheds of the Catskill Mountains, New York have marked differences in nitrogen (N) dynamics among dominant tree species stands. Our objectives

were to study how tree species vary in N uptake to better understand the basis for the observed variation in these forested watersheds. We conducted a .sup.1.sup.5N tracer greenhouse study to determine NH.sup.+.sub.4 and NO.sup.-.sub.3 uptake of American beech (Fagus grandifolia Ehrh.), eastern hemlock (Tsuga Canadensis L.), red oak (Quercus rubra L.) and sugar maple (Acer saccharum Marsh.) seedlings. Seedlings and their native soil were collected in November 1997, over-wintered and allowed to **break dormancy** in spring 1998. Half of the seedlings of each tree species received .sup.1.sup.5NH.sub.4-NO.sub.3 to examine NH.sup.+.sub.4 uptake and the other half received NH.sub.4-.sup.1.sup.5NO.sub.3 to examine NO.sup.-.sub.3 uptake. Plants were harvested 4 days following .sup.1.sup.5N addition.[...]

CTFR Relation sol plante; Cycle azote; Prelevement nutriment; Specificite espece; Foret; Montagne; Arbre forestier feuillu; Arbre forestier resineux; Acer saccharum; Fagus grandifolia; Quercus rubra; Tsuga canadensis; Azote; **Ammonium**; **Nitrate**; New York; Appalaches; Sol forestier; Comparaison interspecifique; Etude experimentale; Composition floristique; Structure vegetation; Variation; Bassin versant; FORET TEMPEREE; Peuplement forestier; Rhizosphere; Solution edaphique; Etude **en** serre; Experimentation **en** pot; Marquage isotopique; Technique traceur; Azote 15; Azote Isotope; Compose marque; Monts Catskill

L153 ANSWER 33 OF 33 PASCAL on STN

ACCESSION NUMBER: 2000-0158245 PASCAL
COPYRIGHT NOTICE:
TITLE (IN ENGLISH): Effects of inhaled nitric oxide and **surfactant** treatment on lung function and pulmonary hemodynamics in bronchoalveolar-lavage-induced respiratory failure
AUTHOR: SISON C.; BRY K.; SEPHUS J.; HALLMAN M.
CORPORATE SOURCE: Department of Pediatrics, University of California, Irvine, California, United States; Division of Neonatal Medicine, Department of Pediatrics, Vanderbilt University, Nashville, Tennessee, United States; Department of Pediatrics, University of Oulu, Oulu, Finland
SOURCE: Pediatric pulmonology, (2000), 29(3), 202-209, 34 refs.
ISSN: 8755-6863 CODEN: PEPUES
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: United States
LANGUAGE: English
AVAILABILITY: INIST-21407, 354000082224660060
UP 20001101

AB Our aim was to study whether inhaled nitric oxide (iNO) moderates respiratory failure induced by bronchoalveolar lavage (BAL) without severe pulmonary hypertension. The following successive treatments, **interrupted** by 20-30-min **rest** periods, were given to piglets: iNO (20 ppm for 20 min), exogenous **surfactant**, iNO, Nω-nitro-L-arginine methyl ester (L-NAME), and iNO. The controls inhaled NO first after L-NAME. Lung mechanics and hemodynamics were measured serially. The pulmonary to systemic arterial pressure ratio decreased during iNO and tended to increase after its discontinuation. In contrast, the iNO-induced decreases in severity of respiratory failure were not reversible during the rest periods. In a second experiment, iNO/ placebo and **surfactant** containing .sup.3H-labeled dipalmitoyl

phosphatidylcholine were given to rabbits. The **surfactant** aggregates and the surface activity from postmortem BAL, and extravascular lung water, were studied. Inhaled NO improved the surface activity and increased the large **surfactant** aggregates. There was no detectable decrease in extravascular lung water. The results suggest that a low dose of iNO has a beneficial effect on the gas exchange that is in part unrelated to its effect on the pulmonary vasculature.

TIEN Effects of inhaled nitric oxide and **surfactant** treatment on lung function and pulmonary hemodynamics in bronchoalveolar-lavage-induced respiratory failure

AB Our aim was to study whether inhaled nitric oxide (iNO) moderates respiratory failure induced by bronchoalveolar lavage (BAL) without severe pulmonary hypertension. The following successive treatments, **interrupted** by 20-30-min **rest** periods, were given to piglets: iNO (20 ppm for 20 min), exogenous **surfactant**, iNO, Nω-nitro-L-arginine methyl ester (L-NAME), and iNO. The controls inhaled NO first after L-NAME. Lung mechanics and hemodynamics were measured serially. The pulmonary to systemic arterial pressure ratio decreased during iNO and tended to increase after its discontinuation. In contrast, the iNO-induced decreases in severity of respiratory failure were not reversible during the rest periods. In a second experiment, iNO/placebo and **surfactant** containing .sup.3H-labeled dipalmitoyl phosphatidylcholine were given to rabbits. The **surfactant** aggregates and the surface activity from postmortem BAL, and extravascular lung water, were studied. Inhaled NO improved the surface activity and increased the large **surfactant** aggregates. There was no detectable decrease in extravascular lung water. The results suggest that a low dose of iNO has a beneficial effect on the gas exchange that is in part unrelated to its effect on the pulmonary vasculature.

CT Respiratory failure; Bronchoalveolar lavage; Nitric oxide; Inhalation; Pulmonary **surfactant**; Lung function; Gas exchange; Treatment; Complication; Exploration; Child

CTFR Insuffisance respiratoire; Lavage bronchoalveolaire; Azote monoxyde; Inhalation; **Surfactant** pulmonaire; Fonction respiratoire; Echange gazeux; Traitement; Complication; Exploration; Enfant

CTES Insuficiencia respiratoria; Lavado broncoalveolar; Nitrogeno monoxido; Inhalacion; **Surfactante** pulmonar; Funcion respiratoria; Intercambio gaseoso; Tratamiento; Complicacion; Exploracion; Nino

=> file stnguide
FILE 'STNGUIDE' ENTERED AT 13:12:47 ON 19 SEP 2005

FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Sep 16, 2005 (20050916/UP).

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=> => d his l137

     (FILE 'HCAPLUS, MEDLINE, EMBASE, BIOSIS, CABA, AGRICOLA, FROSTI, FSTA,
     PASCAL, JICST-EPLUS, CROPU, CROPB, SCISEARCH, WPIX, CONF, CONFSCI,
     DISSABS' ENTERED AT 12:41:35 ON 19 SEP 2005)
L137            3 S L134-L136 AND L42


=> d que l137
L42               QUE  ABB=ON  PLU=ON  (REST OR DORMANT OR DORMANC?)(5A) (B
                  REAK? OR ?DISRUPT? OR ?INTERRUPT?
L134         2514 SEA MCDONALD, B?/AU
L135            6 SEA MC DONALD, B?/AU
L136           19 SEA WORKEL, H?/AU
L137            3 SEA (L134 OR L135 OR L136) AND L

=> d ibib ed ab l137 1-3

L137 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2005 ACS
ACCESSION NUMBER:         2001:63761  HCAPLUS
DOCUMENT NUMBER:          134:96641
TITLE:                    Rest-breaking compositi
                          deciduous fruit trees c
                          nitrogen-containing com
INVENTOR(S):              MacDonald, Brian P.; Wo
PATENT ASSIGNEE(S):       Akzo Nobel N.V., Neth.
SOURCE:                   PCT Int. Appl., 16 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:
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PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001005227	A1	20010125	WO 2000-EP6234	20000703
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
BR 2000012518	A	20020402	BR 2000-12518	20000703
EP 1194038	A1	20020410	EP 2000-949250	20000703
EP 1194038	B1	20030924		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
TR 200200077	T2	20030221	TR 2002-200200077	20000703
NZ 516634	A	20030228	NZ 2000-516634	20000703
AT 250339	E	20031015	AT 2000-949250	20000703
AU 768264	B2	20031204	AU 2000-62680	20000703
PT 1194038	T	20040227	PT 2000-949250	20000703
ES 2207533	T3	20040601	ES 2000-949250	20000703
EG 22491	A	20030331	EG 2000-910	20000715
ZA 2002000360	A	20030415	ZA 2002-360	20020115

STN command problems – duplicates could not be removed from inventor search

PRIORITY APPLN. INFO.: EP 1999-202342 A 19990716
WO 2000-EP6234 W 20000703
ED Entered STN: 26 Jan 2001
AB The invention relates to a composition useful for the **breaking** of **rest** in deciduous fruit species such as apple species and grape species comprising an organic nitrogen-containing compound having a mol. weight of 60
to 300 with the exception of urea and dinitro-ortho-cresol, an inorg. nitrate **rest-breaking** agent, and a surfactant.
Preferably, the organic nitrogen-containing compound is a choline salt such as choline chloride, the inorg. nitrate **rest-breaking** agent is selected from the group consisting of potassium nitrate, calcium nitrate, ammonium nitrate, calcium ammonium nitrate, urea ammonium nitrate, zinc ammonium nitrate, and mixts. thereof, and the surfactant is an alkoxylated amine such as Armoblen, Armobreak, and Berol compds. or an alkoxylated quaternary ammonium compound
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L137 ANSWER 2 OF 3 CROPU COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 2001-83930 CROPU P G
TITLE: Composition for **breaking dormancy** in deciduous fruit species comprising an organic nitrogen-containing compound with specified molecular weight, an inorganic nitrate **dormancy-breaking** agent and a surfactant.
INVENTOR: MacDonald B P; **Workel H A**
PATENT ASSIGNEE: Akzo-Nobel
LOCATION: Arnhem, Neth.
PATENT INFO: WO 2001005227 A1 20010125
APPLICATION INFO: EP 1999-202342 19990716
WO 2000-EP6234 20000703
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2001-202583
FIELD AVAIL.: AB; LA; CT
AB A composition for **breaking dormancy** in deciduous fruit species is described, which comprises an organic N-containing compound with a molecular weight of 60-300Da (except for urea and dinitro-ortho-cresol (DNOC)), an organic nitrate **dormancy-breaking** agent (preferably choline chloride (CC)) and a surfactant. The composition is useful for **breaking dormancy** in deciduous fruits, e.g. pear, peach, apricot, plum, cherry, grape, kiwi, nectarine or almond, especially apple and grape. Effects on bud-break and fruit size in Golden Delicious apple were compared with compositions containing 6% DNOC in oil, 0.5% Dormex (hydrogen cyanamide) + 2% BP (mineral) oil, 1.5% Acer907s98 (alkoxylated amine surfactant) + 6% GAN (a 2:1 mixture of aqueous calcium nitrate and urea ammonium nitrate), 1.5% Acer907s98 + 13% AcerCC98 (CC) and 1.5% Acer907s98 + 6.6% AcerCC98 + 3% GAN.

L137 ANSWER 3 OF 3 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 2001-202583 [20] WPIX
DOC. NO. CPI: C2001-060087
TITLE: Composition for **breaking rest** in deciduous fruit species comprises an organic nitrogen-containing compound with specified molecular weight, an inorganic nitrate **rest-breaking** agent and a surfactant.
DERWENT CLASS: A97 C03

INVENTOR(S): MACDONALD, B P; **WORKEL, H A; MCDONALD, B P**
PATENT ASSIGNEE(S): (ALKU) AKZO NOBEL NV
COUNTRY COUNT: 92
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001005227	A1	20010125	(200120)*	EN	16
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW					
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW					
AU 2000062680	A	20010205	(200128)		
BR 2000012518	A	20020402	(200231)		
EP 1194038	A1	20020410	(200232)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
NZ 516634	A	20030228	(200323)		
ZA 2002000360	A	20030625	(200348)		25
EP 1194038	B1	20030924	(200363)	EN	
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					
MX 2002000581	A1	20030701	(200366)		
DE 60005514	E	20031030	(200379)		
AU 768264	B	20031204	(200382)		
ES 2207533	T3	20040601	(200437)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001005227	A1	WO 2000-EP6234	20000703
AU 2000062680	A	AU 2000-62680	20000703
BR 2000012518	A	BR 2000-12518	20000703
		WO 2000-EP6234	20000703
EP 1194038	A1	EP 2000-949250	20000703
		WO 2000-EP6234	20000703
NZ 516634	A	NZ 2000-516634	20000703
		WO 2000-EP6234	20000703
ZA 2002000360	A	ZA 2002-360	20020115
EP 1194038	B1	EP 2000-949250	20000703
		WO 2000-EP6234	20000703
MX 2002000581	A1	WO 2000-EP6234	20000703
		MX 2002-581	20020116
DE 60005514	E	DE 2000-00005514	20000703
		EP 2000-949250	20000703
		WO 2000-EP6234	20000703
AU 768264	B	AU 2000-62680	20000703
ES 2207533	T3	EP 2000-949250	20000703

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2000062680	A	Based on	WO 2001005227
BR 2000012518	A	Based on	WO 2001005227
EP 1194038	A1	Based on	WO 2001005227
NZ 516634	A	Based on	WO 2001005227

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     EP 1194038       B1 Based on          WO 2001005227
     MX 2002000581    A1 Based on          WO 2001005227
     DE 60005514      E  Based on          EP 1194038
                         Based on          WO 2001005227
     AU 768264        B  Previous Publ.    AU 2000062680
                         Based on          WO 2001005227
     ES 2207533       T3 Based on          EP 1194038

PRIORITY APPLN. INFO.: EP 1999-202342       19990716
ED   20010410
AB   WO 200105227 A UPAB: 20010410
     NOVELTY - A composition for breaking rest in deciduous
     fruit species comprises an organic nitrogen-containing compound with a
     molecular weight of 60 to 300Da (except for urea and dinitro-ortho-
     cresol), an inorganic nitrate rest-breaking agent and
     a surfactant.
          DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for the
     use of the composition for breaking the rest in
     deciduous fruit species.
          USE - The composition is useful for breaking the
     rest in deciduous fruit species, e.g. species bearing pears,
     peaches, apricots, plums, cherries, grapes, kiwis, nectarines or almonds,
     particularly apple and grape species.
          ADVANTAGE - The composition is highly effective and less toxic than
     the most effective compositions known in prior art, allowing their use to
     be eliminated. The composition breaks rest in a manner
     which is safe for the crops and without the treatment having any long-term
     phytotoxic effects. The use of the composition causes less harm to
     beneficial insects, is environmentally acceptable, is non-hazardous to
     operators of the application equipment, and non-corrosive to the
     equipment.
     Dwg.0/0

=> d his l139

     (FILE 'HCAPLUS, MEDLINE, EMBASE, BIOSIS, CABA, AGRICOLA, FROSTI, FSTA,
     PASCAL, JICST-EPLUS, CROPU, CROPB, SCISEARCH, WPIX, CONF, CONFSCI,
     DISSABS' ENTERED AT 12:41:35 ON 19 SEP 2005)
L139           2 S L138 AND AKZO?/PA,CS,SO

=> d que l139
L58              QUE  ABB=ON  PLU=ON  PLANT? OR TREE? OR FRUIT? OR SEED? O
                 R LEAF? OR LEAVES? OR ROOT? OR GRAPE? OR APPLE?
L86              QUE  ABB=ON  PLU=ON  FLOWER? OR BLOOM? OR BUD? OR BLOSSOM
                 ? OR SHOOT?
L134        2514 SEA MCDONALD, B?/AU
L135           6 SEA MC DONALD, B?/AU
L136          19 SEA WORKEL, H?/AU
L138         381 SEA (L134 OR L135 OR L136) AND (L58 OR L86)
L139           2 SEA L138 AND AKZO?/PA,CS,SO


=> d ibib ed ab l139 1-2

L139 ANSWER 1 OF 2  HCAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:         2001:63761  HCAPLUS
DOCUMENT NUMBER:          134:96641
TITLE:                    Rest-breaking composition for deciduous fruit
                          trees comprising an organic
                          nitrogen-containing compound.
```

INVENTOR(S): MacDonald, Brian P.; **Workel, Hennie A.**
PATENT ASSIGNEE(S): **Akzo Nobel N.V., Neth.**
SOURCE: PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001005227	A1	20010125	WO 2000-EP6234	20000703
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
BR 2000012518	A	20020402	BR 2000-12518	20000703
EP 1194038	A1	20020410	EP 2000-949250	20000703
EP 1194038	B1	20030924		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
TR 200200077	T2	20030221	TR 2002-200200077	20000703
NZ 516634	A	20030228	NZ 2000-516634	20000703
AT 250339	E	20031015	AT 2000-949250	20000703
AU 768264	B2	20031204	AU 2000-62680	20000703
PT 1194038	T	20040227	PT 2000-949250	20000703
ES 2207533	T3	20040601	ES 2000-949250	20000703
EG 22491	A	20030331	EG 2000-910	20000715
ZA 2002000360	A	20030415	ZA 2002-360	20020115

PRIORITY APPLN. INFO.: EP 1999-202342 A 19990716
WO 2000-EP6234 W 20000703

ED Entered STN: 26 Jan 2001

AB The invention relates to a composition useful for the breaking of rest in deciduous **fruit** species such as **apple** species and **grape** species comprising an organic nitrogen-containing compound having a mol. weight of 60 to 300 with the exception of urea and dinitro-ortho-cresol, an inorg. nitrate rest-breaking agent, and a surfactant. Preferably, the organic nitrogen-containing compound is a choline salt such as choline chloride, the inorg. nitrate rest-breaking agent is selected from the group consisting of potassium nitrate, calcium nitrate, ammonium nitrate, calcium ammonium nitrate, urea ammonium nitrate, zinc ammonium nitrate, and mixts. thereof, and the surfactant is an alkoxylated amine such as Armoblen, Armobreak, and Berol compds. or an alkoxylated quaternary ammonium compound

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L139 ANSWER 2 OF 2 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 2001-202583 [20] WPIX
DOC. NO. CPI: C2001-060087
TITLE: Composition for breaking rest in deciduous **fruit** species comprises an organic nitrogen-containing compound with specified molecular weight, an inorganic nitrate rest-breaking agent and a surfactant.

DERWENT CLASS: A97 C03
INVENTOR(S): MACDONALD, B P; **WORKEL, H A; MCDONALD, B P**
PATENT ASSIGNEE(S): (ALKU) **AKZO NOBEL NV**
COUNTRY COUNT: 92
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001005227	A1	20010125	(200120)*	EN	16
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW					
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW					
AU 2000062680	A	20010205	(200128)		
BR 2000012518	A	20020402	(200231)		
EP 1194038	A1	20020410	(200232)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
NZ 516634	A	20030228	(200323)		
ZA 2002000360	A	20030625	(200348)		25
EP 1194038	B1	20030924	(200363)	EN	
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					
MX 2002000581	A1	20030701	(200366)		
DE 60005514	E	20031030	(200379)		
AU 768264	B	20031204	(200382)		
ES 2207533	T3	20040601	(200437)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001005227	A1	WO 2000-EP6234	20000703
AU 2000062680	A	AU 2000-62680	20000703
BR 2000012518	A	BR 2000-12518	20000703
		WO 2000-EP6234	20000703
EP 1194038	A1	EP 2000-949250	20000703
		WO 2000-EP6234	20000703
NZ 516634	A	NZ 2000-516634	20000703
		WO 2000-EP6234	20000703
ZA 2002000360	A	ZA 2002-360	20020115
EP 1194038	B1	EP 2000-949250	20000703
		WO 2000-EP6234	20000703
MX 2002000581	A1	WO 2000-EP6234	20000703
		MX 2002-581	20020116
DE 60005514	E	DE 2000-00005514	20000703
		EP 2000-949250	20000703
		WO 2000-EP6234	20000703
AU 768264	B	AU 2000-62680	20000703
ES 2207533	T3	EP 2000-949250	20000703

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2000062680	A	Based on	WO 2001005227
BR 2000012518	A	Based on	WO 2001005227
EP 1194038	A1	Based on	WO 2001005227

NZ 516634	A	Based on	WO 2001005227
EP 1194038	B1	Based on	WO 2001005227
MX 2002000581	A1	Based on	WO 2001005227
DE 60005514	E	Based on	EP 1194038
		Based on	WO 2001005227
AU 768264	B	Previous Publ.	AU 2000062680
		Based on	WO 2001005227
ES 2207533	T3	Based on	EP 1194038

PRIORITY APPLN. INFO: EP 1999-202342 19990716
ED 20010410
AB WO 200105227 A UPAB: 20010410
NOVELTY - A composition for breaking rest in deciduous **fruit** species comprises an organic nitrogen-containing compound with a molecular weight of 60 to 300Da (except for urea and dinitro-ortho-cresol), an inorganic nitrate rest-breaking agent and a surfactant.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for the use of the composition for breaking the rest in deciduous **fruit** species.

USE - The composition is useful for breaking the rest in deciduous **fruit** species, e.g. species bearing pears, peaches, apricots, plums, cherries, **grapes**, kiwis, nectarines or almonds, particularly **apple** and **grape** species.

ADVANTAGE - The composition is highly effective and less toxic than the most effective compositions known in prior art, allowing their use to be eliminated. The composition breaks rest in a manner which is safe for the crops and without the treatment having any long-term phytotoxic effects. The use of the composition causes less harm to beneficial insects, is environmentally acceptable, is non-hazardous to operators of the application equipment, and non-corrosive to the equipment.
Dwg.0/0

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=> => d his l151

     (FILE 'HCAPLUS, BIOSIS, CABA, AGRICOLA, CROPU, CROPB, WPIX' ENTERED AT
     12:57:08 ON 19 SEP 2005)
L151            7 S L148 OR L150

=> d que l151
L42               QUE  ABB=ON  PLU=ON  (REST OR DORMANT OR DORMANC?)(5A) (B
                  REAK? OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT? )
L58               QUE  ABB=ON  PLU=ON  PLANT? OR TREE? OR FRUIT? OR SEED? O
                  R LEAF? OR LEAVES? OR ROOT? OR GRAPE? OR APPLE?
L86               QUE  ABB=ON  PLU=ON  FLOWER? OR BLOOM? OR BUD? OR BLOSSOM
                  ? OR SHOOT?
L145            981 SEA MCDONALD, B?/AU
L146              2 SEA MC DONALD, B?/AU
L147             15 SEA WORKEL, H?/AU
L148              3 SEA (L145 OR L146 OR L147) AND L42
L149            246 SEA (L145 OR L146 OR L147) AND ((L58 OR L86) OR AKZO/SO,CS,PA)

L150              7 SEA L149 AND AKZO/SO,CS,PA
L151              7 SEA L148 OR L150

=> d ibib ed ab l151 1-7

L151 ANSWER 1 OF 7  HCAPLUS  COPYRIGHT 2005 ACS on STN
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ACCESSION NUMBER: 2001:63761 HCAPLUS
DOCUMENT NUMBER: 134:96641
TITLE: **Rest-breaking** composition for deciduous **fruit trees** comprising an organic nitrogen-containing compound.
INVENTOR(S): MacDonald, Brian P.; **Workel, Hennie A.**
PATENT ASSIGNEE(S): **Akzo** Nobel N.V., Neth.
SOURCE: PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001005227	A1	20010125	WO 2000-EP6234	20000703
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
BR 2000012518	A	20020402	BR 2000-12518	20000703
EP 1194038	A1	20020410	EP 2000-949250	20000703
EP 1194038	B1	20030924		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
TR 200200077	T2	20030221	TR 2002-200200077	20000703
NZ 516634	A	20030228	NZ 2000-516634	20000703
AT 250339	E	20031015	AT 2000-949250	20000703
AU 768264	B2	20031204	AU 2000-62680	20000703
PT 1194038	T	20040227	PT 2000-949250	20000703
ES 2207533	T3	20040601	ES 2000-949250	20000703
EG 22491	A	20030331	EG 2000-910	20000715
ZA 2002000360	A	20030415	ZA 2002-360	20020115

PRIORITY APPLN. INFO.: EP 1999-202342 A 19990716
WO 2000-EP6234 W 20000703

ED Entered STN: 26 Jan 2001
AB The invention relates to a composition useful for the **breaking** of **rest** in deciduous **fruit** species such as **apple** species and **grape** species comprising an organic nitrogen-containing compound having a mol. weight of 60 to 300 with the exception of urea and dinitro-ortho-cresol, an inorg. nitrate **rest-breaking** agent, and a surfactant. Preferably, the organic nitrogen-containing compound is a choline salt such as choline chloride, the inorg. nitrate **rest-breaking** agent is selected from the group consisting of potassium nitrate, calcium nitrate, ammonium nitrate, calcium ammonium nitrate, urea ammonium nitrate, zinc ammonium nitrate, and mixts. thereof, and the surfactant is an alkoxylated amine such as Armoblen, Armobreak, and Berol compds. or an alkoxylated quaternary ammonium compound
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L151 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1988:99095 HCAPLUS

DOCUMENT NUMBER: 108:99095
TITLE: Chlorinated solvents now and in the future
AUTHOR(S): **Workel, H. A.**
CORPORATE SOURCE: **Akzo** Zout Chem., Amsterdam, Neth.
SOURCE: Tijdschrift voor Oppervlaktetechnieken van Materialen (1987), 31(6), 140-2
CODEN: TOPMDF; ISSN: 0167-5095
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Dutch
ED Entered STN: 19 Mar 1988
AB A review with 1 reference on the use of chlorinated solvents as cleaning agents in the metal-working industry, their environmental impact, and alternatives.

L151 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1977:19901 HCAPLUS
DOCUMENT NUMBER: 86:19901
TITLE: Solvent extraction, possibilities for the extraction and recovery of metals
AUTHOR(S): **Workel, H. A.**
CORPORATE SOURCE: **AKZO** Zout Chem. Ned., B. V. Hengelo, Neth.
SOURCE: Belgisch-Nederlands Tijdschrift voor Oppervlaktetechnieken van Metalen (1976), 20(8), 226-9
CODEN: BNOTAR; ISSN: 0366-144X
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Dutch
ED Entered STN: 12 May 1984
AB A review is given with no refs.

L151 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1973:494091 HCAPLUS
DOCUMENT NUMBER: 79:94091
TITLE: Metal cleaning with chlorinated hydrocarbons
AUTHOR(S): **Workel, H. A.**
CORPORATE SOURCE: **Akzo** Zout Chem. Ned. B.V., Hengelo, Neth.
SOURCE: Belgisch-Nederlands Tijdschrift voor Oppervlaktetechnieken van Metalen (1973), 16(12), 381-4, 391
CODEN: BNOTAR; ISSN: 0366-144X
DOCUMENT TYPE: Journal
LANGUAGE: Dutch
ED Entered STN: 12 May 1984
AB Degreasing of metal parts may be achieved by using an alkaline aqueous solution or a solvent. The process may be wet (as electroplating) or dry (as lacquering). Chlorinated hydrocarbons may be applied by immersion or spraying in a vapor form. Ultrasound may assist in immersion. In open-air applications, wet cloth or brushes are used. In vapor degreasing, the relatively cold parts are exposed to the vapors ascending from a boiling solvent, and the condensate formed washes off the dirt. The solvent should be nonflammable, nonexplosive, nontoxic, and stable in the presence of water. Its vapor d., b.p., and heat of vaporization should be high, its sp. heat should be low. Its recovery after use should present no problems.

L151 ANSWER 5 OF 7 CABA COPYRIGHT 2005 CABI on STN
ACCESSION NUMBER: 2005:126503 CABA
DOCUMENT NUMBER: 20053118894
TITLE: Quality and nutritional aspects of choline chloride
AUTHOR: **Workel, H. A.**

CORPORATE SOURCE: **Akzo** Nobel NL-Amersfoort, Amersfoort, Netherlands.
SOURCE: Krmiva, (2005) Vol. 47, No. 2, pp. 101-106. Publisher: Hrvatsko Agronomsko Drustvo. Zagreb ISSN: 0023-4850
PUB. COUNTRY: Croatia
DOCUMENT TYPE: Journal
LANGUAGE: English
ENTRY DATE: Entered STN: 20050803 Last Updated on STN: 20050803
ED Entered STN: 20050803 Last Updated on STN: 20050803
AB This article discusses the nutritional aspect of choline chloride in poultry feeding and the quality, handling and processing of choline chloride either in liquid form or with a carrier.

L151 ANSWER 6 OF 7 CROPU COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 2001-83930 CROPU P G
TITLE: Composition for **breaking dormancy** in deciduous **fruit** species comprising an organic nitrogen-containing compound with specified molecular weight, an inorganic nitrate **dormancy-breaking** agent and a surfactant.
INVENTOR: MacDonald B P; **Workel H A**
PATENT ASSIGNEE: **Akzo**-Nobel
LOCATION: Arnhem, Neth.
PATENT INFO: WO 2001005227 A1 20010125
APPLICATION INFO: EP 1999-202342 19990716
WO 2000-EP6234 20000703
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2001-202583
FIELD AVAIL.: AB; LA; CT
AB A composition for **breaking dormancy** in deciduous **fruit** species is described, which comprises an organic N-containing compound with a molecular weight of 60-300Da (except for urea and dinitro-ortho-cresol (DNOC)), an organic nitrate **dormancy-breaking** agent (preferably choline chloride (CC)) and a surfactant. The composition is useful for **breaking dormancy** in deciduous **fruits**, e.g. pear, peach, apricot, plum, cherry, **grape**, kiwi, nectarine or almond, especially **apple** and **grape**. Effects on **bud** -break and **fruit** size in Golden Delicious **apple** were compared with compositions containing 6% DNOC in oil, 0.5% Dormex (hydrogen cyanamide) + 2% BP (mineral) oil, 1.5% Acer907s98 (alkoxylated amine surfactant) + 6% GAN (a 2:1 mixture of aqueous calcium nitrate and urea ammonium nitrate), 1.5% Acer907s98 + 13% AcerCC98 (CC) and 1.5% Acer907s98 + 6.6% AcerCC98 + 3% GAN.

L151 ANSWER 7 OF 7 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 2001-202583 [20] WPIX
DOC. NO. CPI: C2001-060087
TITLE: Composition for **breaking rest** in deciduous **fruit** species comprises an organic nitrogen-containing compound with specified molecular weight, an inorganic nitrate **rest-breaking** agent and a surfactant.
DERWENT CLASS: A97 C03
INVENTOR(S): MACDONALD, B P; **WORKEL, H A; MCDONALD, B P**

PATENT ASSIGNEE(S): (ALKU) **AKZO NOBEL NV**
COUNTRY COUNT: 92
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001005227	A1	20010125	(200120)*	EN	16
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW					
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW					
AU 2000062680	A	20010205	(200128)		
BR 2000012518	A	20020402	(200231)		
EP 1194038	A1	20020410	(200232)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
NZ 516634	A	20030228	(200323)		
ZA 2002000360	A	20030625	(200348)		25
EP 1194038	B1	20030924	(200363)	EN	
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					
MX 2002000581	A1	20030701	(200366)		
DE 60005514	E	20031030	(200379)		
AU 768264	B	20031204	(200382)		
ES 2207533	T3	20040601	(200437)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001005227	A1	WO 2000-EP6234	20000703
AU 2000062680	A	AU 2000-62680	20000703
BR 2000012518	A	BR 2000-12518	20000703
		WO 2000-EP6234	20000703
EP 1194038	A1	EP 2000-949250	20000703
		WO 2000-EP6234	20000703
NZ 516634	A	NZ 2000-516634	20000703
		WO 2000-EP6234	20000703
ZA 2002000360	A	ZA 2002-360	20020115
EP 1194038	B1	EP 2000-949250	20000703
		WO 2000-EP6234	20000703
MX 2002000581	A1	WO 2000-EP6234	20000703
		MX 2002-581	20020116
DE 60005514	E	DE 2000-00005514	20000703
		EP 2000-949250	20000703
		WO 2000-EP6234	20000703
AU 768264	B	AU 2000-62680	20000703
ES 2207533	T3	EP 2000-949250	20000703

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2000062680	A	Based on	WO 2001005227
BR 2000012518	A	Based on	WO 2001005227
EP 1194038	A1	Based on	WO 2001005227
NZ 516634	A	Based on	WO 2001005227
EP 1194038	B1	Based on	WO 2001005227
MX 2002000581	A1	Based on	WO 2001005227

DE 60005514	E	Based on	EP 1194038
		Based on	WO 2001005227
AU 768264	B	Previous Publ.	AU 2000062680
		Based on	WO 2001005227
ES 2207533	T3	Based on	EP 1194038

PRIORITY APPLN. INFO: EP 1999-202342 19990716
ED 20010410
AB WO 200105227 A UPAB: 20010410
NOVELTY - A composition for **breaking rest** in deciduous **fruit** species comprises an organic nitrogen-containing compound with a molecular weight of 60 to 300Da (except for urea and dinitro-ortho-cresol), an inorganic nitrate **rest-breaking** agent and a surfactant.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for the use of the composition for **breaking** the **rest** in deciduous **fruit** species.

USE - The composition is useful for **breaking** the **rest** in deciduous **fruit** species, e.g. species bearing pears, peaches, apricots, plums, cherries, **grapes**, kiwis, nectarines or almonds, particularly **apple** and **grape** species.

ADVANTAGE - The composition is highly effective and less toxic than the most effective compositions known in prior art, allowing their use to be eliminated. The composition **breaks rest** in a manner which is safe for the crops and without the treatment having any long-term phytotoxic effects. The use of the composition causes less harm to beneficial insects, is environmentally acceptable, is non-hazardous to operators of the application equipment, and non-corrosive to the equipment.

Dwg.0/0

=>

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=> d que l53
L1             1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  WO2000-EP6234/APPS
L3               TRANSFER  PLU=ON  L1 1- RN :       9 TERMS
L4             9 SEA FILE=REGISTRY ABB=ON  PLU=ON  L3
L5               QUE  ABB=ON  PLU=ON  ?AMMONIA? OR ?AMMONIUM? OR ?CHOLINE?
                  OR ?ETHANIMINE? OR (?ETHYLENE (1A) DIAMIN?) OR EN
L6               QUE  ABB=ON  PLU=ON  ?NITRAT?
L7               QUE  ABB=ON  PLU=ON  ?SURFACTANT? OR ARMOBLEN OR ARMOBREA
                 K OR BEROL OR (SURFACE (1W) AGENT)
L8               QUE  ABB=ON  PLU=ON  REST (3A) (BREAK? OR ?DISRUPT? OR ?I
                 NTERRUPT? OR ?TERMINAT? )
L9             2 SEA FILE=REGISTRY ABB=ON  PLU=ON  L4 AND C>1
L11            7 SEA FILE=REGISTRY ABB=ON  PLU=ON  L4 NOT L9
L12        52952 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "HORMONES, PLANT"+PFT,NT/CT
L13         7980 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "PLANT HORMONES"+PFT,NT/CT
L14        29172 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "PLANT HORMONES AND REGULATORS
                 "+PFT,NT/CT
L15        12518 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "PLANT REGULATORS"+PFT,NT/CT
L17        15649 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "AMINES, USES"+PFT,NT/CT
L18        11839 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "AMINES, USES AND MISCELLANEOU
                 S"+PFT,NT/CT
L19        37355 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "QUATERNARY AMMONIUM COMPOUNDS
                 "+PFT/CT
L20         9858 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "QUATERNARY AMMONIUM COMPOUNDS
                 , USES"+PFT,NT/CT
L21       230473 SEA FILE=HCAPLUS ABB=ON  PLU=ON  SURFACTANTS+PFT,NT/CT
L22       114062 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "CAPILLARY-ACTIVE SUBSTANCES"+
                 PFT,NT/CT
L23            0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "SURFACE-ACTIVE SUBSTANCES
                 (CAPILLARY- OR INTERFACE-ACTIVE SUBSTANCES"+PFT,NT/CT
L24            0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "SURFACE-ACTIVE SUBSTANCES
                 (CAPILLARY- OR INTERFACE- ACTIVE SUBSTANCES"+PFT,NT/CT
L25        13968 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L9
L26          545 SEA FILE=HCAPLUS ABB=ON  PLU=ON  62-49-7D? OR 67-48-1D?
L27         1072 SEA FILE=REGISTRY ABB=ON  PLU=ON  (62-49-7 OR 67-48-1)/RN,CRN
L28        15672 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L27
L29          251 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ((L25 OR L26 OR L27 OR L28)
                 OR (L17 OR L18 OR L19 OR L20)) AND (L12 OR L13 OR L14 OR L15)
L30         1614 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ((L25 OR L26 OR L27 OR L28)
                 OR (L17 OR L18 OR L19 OR L20)) AND (AGROCHEMICAL BIOREGULATORS)
                 /SC,SX
L31            4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ((L25 OR L26 OR L27 OR L28)
                 OR (L17 OR L18 OR L19 OR L20)) (L) L8
L32            5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L29 OR L30) AND L8
L33            5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L31 OR L32)
L34        38426 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L11
L35          250 SEA FILE=REGISTRY ABB=ON  PLU=ON  (10124-37-5/RN,CRN OR
                 15245-12-2/RN,CRN OR 15978-77-5/RN,CRN OR 316373-41-8/RN,CRN
                 OR 6484-52-2/RN,CRN OR 73376-28-0/RN,CRN OR 7757-79-1/RN,CRN)
L36        38763 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L35
L37           20 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L29 OR L30 OR L31) AND (L34
                 OR L36)
L38           15 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L37 NOT L33
L39           12 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L38 AND (AGROCHEMICAL
                 BIOREGULATORS)/SC
L41           12 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L34 OR L36) AND L8
L42              QUE  ABB=ON  PLU=ON  (REST OR DORMANT OR DORMANC?)(5A) (B
                 REAK? OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT? )
L44           24 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L34 OR L36) (L) L42
L45            9 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L25 OR L26 OR L28 OR (L17 OR
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                L18 OR L19 OR L20)) AND L42
L46           5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L21 OR L22 OR L23 OR L24)
                AND L42
L49          33 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L44 OR L45 OR L46)
L50          44 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L49 OR L33 OR L39
L51          47 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L50 OR L41
L52          47 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L51 AND (L5 OR L6 OR L7 OR L8
                OR L42)
L53          35 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L52 AND (AY<2000 OR PY<2000
                OR PRY<2000)


=> d que l54
L1            1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  WO2000-EP6234/APPS
L3              TRANSFER  PLU=ON  L1 1- RN :       9 TERMS
L4            9 SEA FILE=REGISTRY ABB=ON  PLU=ON  L3
L5              QUE  ABB=ON  PLU=ON  ?AMMONIA? OR ?AMMONIUM? OR ?CHOLINE?
                 OR ?ETHANIMINE? OR (?ETHYLENE (1A) DIAMIN?) OR EN
L6              QUE  ABB=ON  PLU=ON  ?NITRAT?
L7              QUE  ABB=ON  PLU=ON  ?SURFACTANT? OR ARMOBLEN OR ARMOBREA
                K OR BEROL OR (SURFACE (1W) AGENT)
L8              QUE  ABB=ON  PLU=ON  REST (3A) (BREAK? OR ?DISRUPT? OR ?I
                NTERRUPT? OR ?TERMINAT? )
L9            2 SEA FILE=REGISTRY ABB=ON  PLU=ON  L4 AND C>1
L11           7 SEA FILE=REGISTRY ABB=ON  PLU=ON  L4 NOT L9
L12       52952 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "HORMONES, PLANT"+PFT,NT/CT
L13        7980 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "PLANT HORMONES"+PFT,NT/CT
L14       29172 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "PLANT HORMONES AND REGULATORS
                "+PFT,NT/CT
L15       12518 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "PLANT REGULATORS"+PFT,NT/CT
L17       15649 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "AMINES, USES"+PFT,NT/CT
L18       11839 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "AMINES, USES AND MISCELLANEOU
                S"+PFT,NT/CT
L19       37355 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "QUATERNARY AMMONIUM COMPOUNDS
                "+PFT/CT
L20        9858 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "QUATERNARY AMMONIUM COMPOUNDS
                , USES"+PFT,NT/CT
L21      230473 SEA FILE=HCAPLUS ABB=ON  PLU=ON  SURFACTANTS+PFT,NT/CT
L22      114062 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "CAPILLARY-ACTIVE SUBSTANCES"+
                PFT,NT/CT
L23           0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "SURFACE-ACTIVE SUBSTANCES
                (CAPILLARY- OR INTERFACE-ACTIVE SUBSTANCES"+PFT,NT/CT
L24           0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "SURFACE-ACTIVE SUBSTANCES
                (CAPILLARY- OR INTERFACE- ACTIVE SUBSTANCES"+PFT,NT/CT
L25       13968 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L9
L26         545 SEA FILE=HCAPLUS ABB=ON  PLU=ON  62-49-7D? OR 67-48-1D?
L27        1072 SEA FILE=REGISTRY ABB=ON  PLU=ON  (62-49-7 OR 67-48-1)/RN,CRN
L28       15672 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L27
L29         251 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ((L25 OR L26 OR L27 OR L28)
                OR (L17 OR L18 OR L19 OR L20)) AND (L12 OR L13 OR L14 OR L15)
L30        1614 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ((L25 OR L26 OR L27 OR L28)
                OR (L17 OR L18 OR L19 OR L20)) AND (AGROCHEMICAL BIOREGULATORS)
                /SC,SX
L31           4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ((L25 OR L26 OR L27 OR L28)
                OR (L17 OR L18 OR L19 OR L20)) (L) L8
L32           5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L29 OR L30) AND L8
L33           5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L31 OR L32)
L34       38426 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L11
L35         250 SEA FILE=REGISTRY ABB=ON  PLU=ON  (10124-37-5/RN,CRN OR
                15245-12-2/RN,CRN OR 15978-77-5/RN,CRN OR 316373-41-8/RN,CRN
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                OR 6484-52-2/RN,CRN OR 73376-28-0/RN,CRN OR 7757-79-1/RN,CRN)
L36         38763 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L35
L37            20 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L29 OR L30 OR L31) AND (L34
                  OR L36)
L38            15 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L37 NOT L33
L39            12 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L38 AND (AGROCHEMICAL
                  BIOREGULATORS)/SC
L41            12 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L34 OR L36) AND L8
L42               QUE  ABB=ON  PLU=ON  (REST OR DORMANT OR DORMANC?)(5A) (B
                  REAK? OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT? )
L44            24 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L34 OR L36) (L) L42
L45             9 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L25 OR L26 OR L28 OR (L17 OR
                  L18 OR L19 OR L20)) AND L42
L46             5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L21 OR L22 OR L23 OR L24)
                  AND L42
L49            33 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L44 OR L45 OR L46)
L50            44 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L49 OR L33 OR L39
L51            47 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L50 OR L41
L52            47 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L51 AND (L5 OR L6 OR L7 OR L8
                  OR L42)
L53            35 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L52 AND (AY<2000 OR PY<2000
                  OR PRY<2000)
L54            12 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L52 NOT L53


=> d que l72
L5                QUE  ABB=ON  PLU=ON  ?AMMONIA? OR ?AMMONIUM? OR ?CHOLINE?
                   OR ?ETHANIMINE? OR (?ETHYLENE (1A) DIAMIN?) OR EN
L6                QUE  ABB=ON  PLU=ON  ?NITRAT?
L27           1072 SEA FILE=REGISTRY ABB=ON  PLU=ON  (62-49-7 OR 67-48-1)/RN,CRN
L35            250 SEA FILE=REGISTRY ABB=ON  PLU=ON  (10124-37-5/RN,CRN OR
                  15245-12-2/RN,CRN OR 15978-77-5/RN,CRN OR 316373-41-8/RN,CRN
                  OR 6484-52-2/RN,CRN OR 73376-28-0/RN,CRN OR 7757-79-1/RN,CRN)
L42               QUE  ABB=ON  PLU=ON  (REST OR DORMANT OR DORMANC?)(5A) (B
                  REAK? OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT? )
L58               QUE  ABB=ON  PLU=ON  PLANT? OR TREE? OR FRUIT? OR SEED? O
                  R LEAF? OR LEAVES? OR ROOT? OR GRAPE? OR APPLE?
L59            33 SEA FILE=REGISTRY ABB=ON  PLU=ON  L27 AND (MEDLINE OR EMBASE
                  OR BIOSIS OR CROPU OR CROPB OR AGRICOLA)/LC
L60            11 SEA FILE=REGISTRY ABB=ON  PLU=ON  L35 AND (MEDLINE OR EMBASE
                  OR BIOSIS OR CROPU OR CROPB OR AGRICOLA)/LC
L61               SEL  PLU=ON  L59 1- CHEM :      170 TERMS
L62         30633 SEA FILE=MEDLINE ABB=ON  PLU=ON  L61
L63               SEL  PLU=ON  L60 1- CHEM :       84 TERMS
L64       1283625 SEA FILE=MEDLINE ABB=ON  PLU=ON  L63
L65            89 SEA FILE=MEDLINE ABB=ON  PLU=ON  (L64 OR L6) AND L42
L66            29 SEA FILE=MEDLINE ABB=ON  PLU=ON  (L62 OR L5) AND L42
L70            16 SEA FILE=MEDLINE ABB=ON  PLU=ON  (L65 OR L66) AND L58
L71            15 SEA FILE=MEDLINE ABB=ON  PLU=ON  L70 NOT ATHLETES/TI
L72             4 SEA FILE=MEDLINE ABB=ON  PLU=ON  L71 AND (PY<2000 OR MY<2000)


=> d que l73
L5                QUE  ABB=ON  PLU=ON  ?AMMONIA? OR ?AMMONIUM? OR ?CHOLINE?
                   OR ?ETHANIMINE? OR (?ETHYLENE (1A) DIAMIN?) OR EN
L6                QUE  ABB=ON  PLU=ON  ?NITRAT?
L27           1072 SEA FILE=REGISTRY ABB=ON  PLU=ON  (62-49-7 OR 67-48-1)/RN,CRN
L35            250 SEA FILE=REGISTRY ABB=ON  PLU=ON  (10124-37-5/RN,CRN OR
                  15245-12-2/RN,CRN OR 15978-77-5/RN,CRN OR 316373-41-8/RN,CRN
                  OR 6484-52-2/RN,CRN OR 73376-28-0/RN,CRN OR 7757-79-1/RN,CRN)
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L42             QUE  ABB=ON  PLU=ON  (REST OR DORMANT OR DORMANC?)(5A) (B
                REAK? OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT? )
L58             QUE  ABB=ON  PLU=ON  PLANT? OR TREE? OR FRUIT? OR SEED? O
                R LEAF? OR LEAVES? OR ROOT? OR GRAPE? OR APPLE?
L59          33 SEA FILE=REGISTRY ABB=ON  PLU=ON  L27 AND (MEDLINE OR EMBASE
                OR BIOSIS OR CROPU OR CROPB OR AGRICOLA)/LC
L60          11 SEA FILE=REGISTRY ABB=ON  PLU=ON  L35 AND (MEDLINE OR EMBASE
                OR BIOSIS OR CROPU OR CROPB OR AGRICOLA)/LC
L61             SEL  PLU=ON  L59 1- CHEM :     170 TERMS
L62       30633 SEA FILE=MEDLINE ABB=ON  PLU=ON  L61
L63             SEL  PLU=ON  L60 1- CHEM :      84 TERMS
L64     1283625 SEA FILE=MEDLINE ABB=ON  PLU=ON  L63
L65          89 SEA FILE=MEDLINE ABB=ON  PLU=ON  (L64 OR L6) AND L42
L66          29 SEA FILE=MEDLINE ABB=ON  PLU=ON  (L62 OR L5) AND L42
L70          16 SEA FILE=MEDLINE ABB=ON  PLU=ON  (L65 OR L66) AND L58
L71          15 SEA FILE=MEDLINE ABB=ON  PLU=ON  L70 NOT ATHLETES/TI
L72           4 SEA FILE=MEDLINE ABB=ON  PLU=ON  L71 AND (PY<2000 OR MY<2000)
L73          11 SEA FILE=MEDLINE ABB=ON  PLU=ON  L71 NOT L72


=> d que l85
L5              QUE  ABB=ON  PLU=ON  ?AMMONIA? OR ?AMMONIUM? OR ?CHOLINE?
                 OR ?ETHANIMINE? OR (?ETHYLENE (1A) DIAMIN?) OR EN
L6              QUE  ABB=ON  PLU=ON  ?NITRAT?
L7              QUE  ABB=ON  PLU=ON  ?SURFACTANT? OR ARMOBLEN OR ARMOBREA
                K OR BEROL OR (SURFACE (1W) AGENT)
L27          1072 SEA FILE=REGISTRY ABB=ON  PLU=ON  (62-49-7 OR 67-48-1)/RN,CRN
L35           250 SEA FILE=REGISTRY ABB=ON  PLU=ON  (10124-37-5/RN,CRN OR
                15245-12-2/RN,CRN OR 15978-77-5/RN,CRN OR 316373-41-8/RN,CRN
                OR 6484-52-2/RN,CRN OR 73376-28-0/RN,CRN OR 7757-79-1/RN,CRN)
L58             QUE  ABB=ON  PLU=ON  PLANT? OR TREE? OR FRUIT? OR SEED? O
                R LEAF? OR LEAVES? OR ROOT? OR GRAPE? OR APPLE?
L59          33 SEA FILE=REGISTRY ABB=ON  PLU=ON  L27 AND (MEDLINE OR EMBASE
                OR BIOSIS OR CROPU OR CROPB OR AGRICOLA)/LC
L60          11 SEA FILE=REGISTRY ABB=ON  PLU=ON  L35 AND (MEDLINE OR EMBASE
                OR BIOSIS OR CROPU OR CROPB OR AGRICOLA)/LC
L74             SEL  PLU=ON  L60 1- CHEM :      84 TERMS
L75     1209621 SEA FILE=EMBASE ABB=ON  PLU=ON  L74
L76             SEL  PLU=ON  L59 1- CHEM :     170 TERMS
L77       26770 SEA FILE=EMBASE ABB=ON  PLU=ON  L76
L78         431 SEA FILE=EMBASE ABB=ON  PLU=ON  (REST OR DORMANT OR DORMANC?)(5
                A) (BREAK? OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT? )
L80          75 SEA FILE=EMBASE ABB=ON  PLU=ON  L78 AND L75
L81           1 SEA FILE=EMBASE ABB=ON  PLU=ON  L77 AND L78
L82          15 SEA FILE=EMBASE ABB=ON  PLU=ON  L78 AND (L6 OR L7 OR L5)
L83           5 SEA FILE=EMBASE ABB=ON  PLU=ON  (L80 OR L81 OR L82) AND (L58
                OR FLOWER? OR BLOOM? OR BUD? OR BLOSSOM? OR SHOOT?)
L84           3 SEA FILE=EMBASE ABB=ON  PLU=ON  L83 NOT (ATHLETES OR HOUSEKEEPI
                NG)/TI
L85           3 SEA FILE=EMBASE ABB=ON  PLU=ON  L84 AND (PY<2000 OR MY<2000)


=> d his l103

     (FILE 'BIOSIS, AGRICOLA, CABA' ENTERED AT 11:51:54 ON 19 SEP 2005)
L103          34 S L102 AND (AY<2000 OR PY<2000 OR PRY<2000 OR MY<2000)

=> d que l103
L5              QUE  ABB=ON  PLU=ON  ?AMMONIA? OR ?AMMONIUM? OR ?CHOLINE?
                 OR ?ETHANIMINE? OR (?ETHYLENE (1A) DIAMIN?) OR EN
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L6              QUE  ABB=ON  PLU=ON  ?NITRAT?
L7              QUE  ABB=ON  PLU=ON  ?SURFACTANT? OR ARMOBLEN OR ARMOBREA
                K OR BEROL OR (SURFACE (1W) AGENT)
L27         1072 SEA FILE=REGISTRY ABB=ON  PLU=ON  (62-49-7 OR 67-48-1)/RN,CRN
L35          250 SEA FILE=REGISTRY ABB=ON  PLU=ON  (10124-37-5/RN,CRN OR
                15245-12-2/RN,CRN OR 15978-77-5/RN,CRN OR 316373-41-8/RN,CRN
                OR 6484-52-2/RN,CRN OR 73376-28-0/RN,CRN OR 7757-79-1/RN,CRN)
L42             QUE  ABB=ON  PLU=ON  (REST OR DORMANT OR DORMANC?)(5A) (B
                REAK? OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT? )
L58             QUE  ABB=ON  PLU=ON  PLANT? OR TREE? OR FRUIT? OR SEED? O
                R LEAF? OR LEAVES? OR ROOT? OR GRAPE? OR APPLE?
L86             QUE  ABB=ON  PLU=ON  FLOWER? OR BLOOM? OR BUD? OR BLOSSOM
                ? OR SHOOT?
L87           30 SEA FILE=REGISTRY ABB=ON  PLU=ON  L27 AND (CABA OR AGRICOLA OR
                BIOSIS)/LC
L88           11 SEA FILE=REGISTRY ABB=ON  PLU=ON  L35 AND (CABA OR AGRICOLA OR
                BIOSIS)/LC
L89             SEL  PLU=ON  L88 1- CHEM :       84 TERMS
L90     1533573 SEA L89
L91             SEL  PLU=ON  L87 1- CHEM :      165 TERMS
L92       63238 SEA L91
L93         894 SEA L42 AND (L90 OR L6)
L94         227 SEA L42 AND (L92 OR L5)
L95          11 SEA L93 AND L7
L96           2 SEA L94 AND L7
L97          11 SEA L95 OR L96
L98          64 SEA L93 AND L94
L99          64 SEA L98 AND (L58 OR L86)
L100         40 SEA L99 AND (REST OR RESTING OR DORMANT OR DORMANCY)/TI,IT,ST,C
                C,CT,STP
L101         49 SEA L97 OR L100
L102         42 DUP REM L101 (7 DUPLICATES REMOVED)
L103         34 SEA L102 AND (AY<2000 OR PY<2000 OR PRY<2000 OR MY<2000)


=> d his l104

     (FILE 'BIOSIS, AGRICOLA, CABA' ENTERED AT 11:51:54 ON 19 SEP 2005)
L104          8 S L102 NOT L103

=> d que l104
L5              QUE  ABB=ON  PLU=ON  ?AMMONIA? OR ?AMMONIUM? OR ?CHOLINE?
                 OR ?ETHANIMINE? OR (?ETHYLENE (1A) DIAMIN?) OR EN
L6              QUE  ABB=ON  PLU=ON  ?NITRAT?
L7              QUE  ABB=ON  PLU=ON  ?SURFACTANT? OR ARMOBLEN OR ARMOBREA
                K OR BEROL OR (SURFACE (1W) AGENT)
L27         1072 SEA FILE=REGISTRY ABB=ON  PLU=ON  (62-49-7 OR 67-48-1)/RN,CRN
L35          250 SEA FILE=REGISTRY ABB=ON  PLU=ON  (10124-37-5/RN,CRN OR
                15245-12-2/RN,CRN OR 15978-77-5/RN,CRN OR 316373-41-8/RN,CRN
                OR 6484-52-2/RN,CRN OR 73376-28-0/RN,CRN OR 7757-79-1/RN,CRN)
L42             QUE  ABB=ON  PLU=ON  (REST OR DORMANT OR DORMANC?)(5A) (B
                REAK? OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT? )
L58             QUE  ABB=ON  PLU=ON  PLANT? OR TREE? OR FRUIT? OR SEED? O
                R LEAF? OR LEAVES? OR ROOT? OR GRAPE? OR APPLE?
L86             QUE  ABB=ON  PLU=ON  FLOWER? OR BLOOM? OR BUD? OR BLOSSOM
                ? OR SHOOT?
L87           30 SEA FILE=REGISTRY ABB=ON  PLU=ON  L27 AND (CABA OR AGRICOLA OR
                BIOSIS)/LC
L88           11 SEA FILE=REGISTRY ABB=ON  PLU=ON  L35 AND (CABA OR AGRICOLA OR
                BIOSIS)/LC
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L89             SEL  PLU=ON  L88 1- CHEM :      84 TERMS   .
L90     1533573 SEA L89
L91             SEL  PLU=ON  L87 1- CHEM :     165 TERMS
L92       63238 SEA L91
L93         894 SEA L42 AND (L90 OR L6)
L94         227 SEA L42 AND (L92 OR L5)
L95          11 SEA L93 AND L7
L96           2 SEA L94 AND L7
L97          11 SEA L95 OR L96
L98          64 SEA L93 AND L94
L99          64 SEA L98 AND (L58 OR L86)
L100         40 SEA L99 AND (REST OR RESTING OR DORMANT OR DORMANCY)/TI,IT,ST,C
                C,CT,STP
L101         49 SEA L97 OR L100
L102         42 DUP REM L101 (7 DUPLICATES REMOVED)
L103         34 SEA L102 AND (AY<2000 OR PY<2000 OR PRY<2000 OR MY<2000)
L104          8 SEA L102 NOT L103


=> d his l113

     (FILE 'PASCAL, JICST-EPLUS, FROSTI, FSTA, CROPU, CROPB, SCISEARCH'
     ENTERED AT 11:55:20 ON 19 SEP 2005)
L113         13 DUP REM L112 (1 DUPLICATE REMOVED)

=> d que l113
L5              QUE  ABB=ON  PLU=ON  ?AMMONIA? OR ?AMMONIUM? OR ?CHOLINE?
                 OR ?ETHANIMINE? OR (?ETHYLENE (1A) DIAMIN?) OR EN
L6              QUE  ABB=ON  PLU=ON  ?NITRAT?
L7              QUE  ABB=ON  PLU=ON  ?SURFACTANT? OR ARMOBLEN OR ARMOBREA
                K OR BEROL OR (SURFACE (1W) AGENT)
L42             QUE  ABB=ON  PLU=ON  (REST OR DORMANT OR DORMANC?)(5A) (B
                REAK? OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT? )
L105           102 SEA L42 AND L6
L106           166 SEA L42 AND L5
L107            16 SEA L42 AND L7
L108             6 SEA ((L105 OR L106)) AND L7
L109            16 SEA L107 OR L108
L110            16 SEA L105 AND L106
L111            27 SEA (L109 OR L110)
L112            14 SEA L111 AND (AY<2000 OR PY<2000 OR PRY<2000 OR MY<2000)
L113            13 DUP REM L112 (1 DUPLICATE REMOVED)


=> d his l115

     (FILE 'PASCAL, JICST-EPLUS, FROSTI, FSTA, CROPU, CROPB, SCISEARCH'
     ENTERED AT 11:55:20 ON 19 SEP 2005)
L115             2 DUP REM L114 (2 DUPLICATES REMOVED)

=> d que l115
L5              QUE  ABB=ON  PLU=ON  ?AMMONIA? OR ?AMMONIUM? OR ?CHOLINE?
                 OR ?ETHANIMINE? OR (?ETHYLENE (1A) DIAMIN?) OR EN
L6              QUE  ABB=ON  PLU=ON  ?NITRAT?
L7              QUE  ABB=ON  PLU=ON  ?SURFACTANT? OR ARMOBLEN OR ARMOBREA
                K OR BEROL OR (SURFACE (1W) AGENT)
L42             QUE  ABB=ON  PLU=ON  (REST OR DORMANT OR DORMANC?)(5A) (B
                REAK? OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT? )
L105           102 SEA L42 AND L6
L106           166 SEA L42 AND L5
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L107         16 SEA L42 AND L7
L108          6 SEA ((L105 OR L106)) AND L7
L109         16 SEA L107 OR L108
L110         16 SEA L105 AND L106
L111         27 SEA (L109 OR L110)
L112         14 SEA L111 AND (AY<2000 OR PY<2000 OR PRY<2000 OR MY<2000)
L114          4 SEA L111 NOT L112
L115          2 DUP REM L114 (2 DUPLICATES REMOVED)


=> d que l132
L116        565 SEA FILE=WPIX ABB=ON  PLU=ON  ((REST OR RESTING? OR DORMANT OR
                DORMANC?)(5A) (BREAK? OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT?
                ))/BIX
L117       8883 SEA FILE=WPIX ABB=ON  PLU=ON  (B05-C01 OR B05-C02 OR C05-C01
                OR C05-C02)/MC
L118       5915 SEA FILE=WPIX ABB=ON  PLU=ON  (B12-M09 OR C12-M09)/MC
L123          2 SEA FILE=WPIX ABB=ON  PLU=ON  L116 AND L117
L124          9 SEA FILE=WPIX ABB=ON  PLU=ON  L116 AND (?AMMONIA?/BIX OR
                ?AMMONIUM?/BIX OR ?CHOLINE?/BIX OR ?ETHANIMINE?/BIX OR
                (?ETHYLENE/BIX (1A) DIAMIN?/BIX) OR EN/BIX)
L125          4 SEA FILE=WPIX ABB=ON  PLU=ON  L116 AND (?NITRAT?/BIX)
L126          4 SEA FILE=WPIX ABB=ON  PLU=ON  L123 OR L125
L127          1 SEA FILE=WPIX ABB=ON  PLU=ON  L116 AND L118
L128          9 SEA FILE=WPIX ABB=ON  PLU=ON  (L123 OR L124 OR L125 OR L126 OR
                L127)
L129       7543 SEA FILE=WPIX ABB=ON  PLU=ON  (C10-A22 OR B10-A22)/MC
L130          4 SEA FILE=WPIX ABB=ON  PLU=ON  L116 AND L129
L131         10 SEA FILE=WPIX ABB=ON  PLU=ON  L128 OR L130
L132          9 SEA FILE=WPIX ABB=ON  PLU=ON  L131 AND (AY<2000 OR PY<2000 OR
                PRY<2000)


=> d que l133
L116        565 SEA FILE=WPIX ABB=ON  PLU=ON  ((REST OR RESTING? OR DORMANT OR
                DORMANC?)(5A) (BREAK? OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT?
                ))/BIX
L117       8883 SEA FILE=WPIX ABB=ON  PLU=ON  (B05-C01 OR B05-C02 OR C05-C01
                OR C05-C02)/MC
L118       5915 SEA FILE=WPIX ABB=ON  PLU=ON  (B12-M09 OR C12-M09)/MC
L123          2 SEA FILE=WPIX ABB=ON  PLU=ON  L116 AND L117
L124          9 SEA FILE=WPIX ABB=ON  PLU=ON  L116 AND (?AMMONIA?/BIX OR
                ?AMMONIUM?/BIX OR ?CHOLINE?/BIX OR ?ETHANIMINE?/BIX OR
                (?ETHYLENE/BIX (1A) DIAMIN?/BIX) OR EN/BIX)
L125          4 SEA FILE=WPIX ABB=ON  PLU=ON  L116 AND (?NITRAT?/BIX)
L126          4 SEA FILE=WPIX ABB=ON  PLU=ON  L123 OR L125
L127          1 SEA FILE=WPIX ABB=ON  PLU=ON  L116 AND L118
L128          9 SEA FILE=WPIX ABB=ON  PLU=ON  (L123 OR L124 OR L125 OR L126 OR
                L127)
L129       7543 SEA FILE=WPIX ABB=ON  PLU=ON  (C10-A22 OR B10-A22)/MC
L130          4 SEA FILE=WPIX ABB=ON  PLU=ON  L116 AND L129
L131         10 SEA FILE=WPIX ABB=ON  PLU=ON  L128 OR L130
L132          9 SEA FILE=WPIX ABB=ON  PLU=ON  L131 AND (AY<2000 OR PY<2000 OR
                PRY<2000)
L133          1 SEA FILE=WPIX ABB=ON  PLU=ON  L131 NOT L132


=> d his l137

     (FILE 'HCAPLUS, MEDLINE, EMBASE, BIOSIS, CABA, AGRICOLA, FROSTI, FSTA,
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     PASCAL, JICST-EPLUS, CROPU, CROPB, SCISEARCH, WPIX, CONF, CONFSCI,
     DISSABS' ENTERED AT 12:41:35 ON 19 SEP 2005)
L137            3 S L134-L136 AND L42

=> d que l137
L42               QUE  ABB=ON  PLU=ON  (REST OR DORMANT OR DORMANC?)(5A) (B
                  REAK? OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT? )
L134         2514 SEA MCDONALD, B?/AU
L135            6 SEA MC DONALD, B?/AU
L136           19 SEA WORKEL, H?/AU
L137            3 SEA (L134 OR L135 OR L136) AND L42


=> d his l139

     (FILE 'HCAPLUS, MEDLINE, EMBASE, BIOSIS, CABA, AGRICOLA, FROSTI, FSTA,
     PASCAL, JICST-EPLUS, CROPU, CROPB, SCISEARCH, WPIX, CONF, CONFSCI,
     DISSABS' ENTERED AT 12:41:35 ON 19 SEP 2005)
L139            2 S L138 AND AKZO?/PA,CS,SO

=> d que l139
L58               QUE  ABB=ON  PLU=ON  PLANT? OR TREE? OR FRUIT? OR SEED? O
                  R LEAF? OR LEAVES? OR ROOT? OR GRAPE? OR APPLE?
L86               QUE  ABB=ON  PLU=ON  FLOWER? OR BLOOM? OR BUD? OR BLOSSOM
                  ? OR SHOOT?
L134         2514 SEA MCDONALD, B?/AU
L135            6 SEA MC DONALD, B?/AU
L136           19 SEA WORKEL, H?/AU
L138          381 SEA (L134 OR L135 OR L136) AND (L58 OR L86)
L139            2 SEA L138 AND AKZO?/PA,CS,SO


=> d his l151

     (FILE 'HCAPLUS, BIOSIS, CABA, AGRICOLA, CROPU, CROPB, WPIX' ENTERED AT
     12:57:08 ON 19 SEP 2005)
L151            7 S L148 OR L150

=> d que l151
L42               QUE  ABB=ON  PLU=ON  (REST OR DORMANT OR DORMANC?)(5A) (B
                  REAK? OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT? )
L58               QUE  ABB=ON  PLU=ON  PLANT? OR TREE? OR FRUIT? OR SEED? O
                  R LEAF? OR LEAVES? OR ROOT? OR GRAPE? OR APPLE?
L86               QUE  ABB=ON  PLU=ON  FLOWER? OR BLOOM? OR BUD? OR BLOSSOM
                  ? OR SHOOT?
L145          981 SEA MCDONALD, B?/AU
L146            2 SEA MC DONALD, B?/AU
L147           15 SEA WORKEL, H?/AU
L148            3 SEA (L145 OR L146 OR L147) AND L42
L149          246 SEA (L145 OR L146 OR L147) AND ((L58 OR L86) OR AKZO/SO,CS,PA)

L150            7 SEA L149 AND AKZO/SO,CS,PA
L151            7 SEA L148 OR L150


=> d his ful

     (FILE 'HOME' ENTERED AT 09:06:26 ON 19 SEP 2005)

     FILE 'ZCAPLUS' ENTERED AT 09:06:40 ON 19 SEP 2005
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              E WO2000-EP6234/APPS

     FILE 'HCAPLUS' ENTERED AT 09:07:30 ON 19 SEP 2005
L1            1 SEA ABB=ON  PLU=ON  WO2000-EP6234/APPS
              SAVE TEMP L1 QAZ225HCAAPP/A
              D IBIB ED AB IND

     FILE 'STNGUIDE' ENTERED AT 09:07:59 ON 19 SEP 2005

     FILE 'WPIX' ENTERED AT 09:08:51 ON 19 SEP 2005
L2            1 SEA ABB=ON  PLU=ON  WO2000-EP6234/APPS
              SAVE TEMP L2 QAZ225WPIAPP/A
              D IALL

     FILE 'STNGUIDE' ENTERED AT 09:09:21 ON 19 SEP 2005

     FILE 'REGISTRY' ENTERED AT 09:10:15 ON 19 SEP 2005

     FILE 'HCAPLUS' ENTERED AT 09:10:21 ON 19 SEP 2005
L3            TRA L1 1- RN :         9 TERMS

     FILE 'REGISTRY' ENTERED AT 09:10:24 ON 19 SEP 2005
L4            9 SEA ABB=ON  PLU=ON  L3
              SAVE TEMP L4 QAZ225REGAPP/A
              D SCAN

     FILE 'STNGUIDE' ENTERED AT 09:10:54 ON 19 SEP 2005

     FILE 'HCAPLUS' ENTERED AT 09:39:56 ON 19 SEP 2005
L5            QUE ABB=ON  PLU=ON  ?AMMONIA? OR ?AMMONIUM? OR ?CHOLINE? OR
              ?ETHANIMINE? OR (?ETHYLENE (1A) DIAMIN?) OR EN
L6            QUE ABB=ON  PLU=ON  ?NITRAT?
L7            QUE ABB=ON  PLU=ON  ?SURFACTANT? OR ARMOBLEN OR ARMOBREAK OR
              BEROL OR (SURFACE (1W) AGENT)
L8            QUE ABB=ON  PLU=ON  REST (3A) (BREAK? OR ?DISRUPT? OR ?INTERRUP
              T? OR ?TERMINAT? )

     FILE 'ZCAPLUS' ENTERED AT 09:40:35 ON 19 SEP 2005
              E ETHYLENE DIAMINE/CT
              E AMINES, USES/CT
              E QUATERNARY AMMONIUM COMPOUNDS
              E QUATERNARY AMMONIUM COMPOUNDS/CT
              E E51+ALL
              E HORMONES, PLANT/CT
              E E185+ALL
              E CHOLINE/CT
              E E246+ALL

     FILE 'REGISTRY' ENTERED AT 09:44:48 ON 19 SEP 2005
L9            2 SEA ABB=ON  PLU=ON  L4 AND C>1
              E GAN/CN
L10           1 SEA ABB=ON  PLU=ON  L4 AND GAN/CN
              D SCAN
              SAVE TEMP L9 QAZ225REGA/A
L11           7 SEA ABB=ON  PLU=ON  L4 NOT L9
              SAVE TEMP L11 QAZ225REGB/A

     FILE 'STNGUIDE' ENTERED AT 09:46:46 ON 19 SEP 2005
              D SAVED
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     FILE 'ZCAPLUS' ENTERED AT 09:47:40 ON 19 SEP 2005
               E SURFACTANTS/CT
               E E278+ALL

     FILE 'STNGUIDE' ENTERED AT 09:49:20 ON 19 SEP 2005

     FILE 'HCAPLUS' ENTERED AT 09:51:21 ON 19 SEP 2005
L*** DEL      0 S "HORMONES, PLANT"PFT,NT/CT
L12       52952 SEA ABB=ON  PLU=ON  "HORMONES, PLANT"+PFT,NT/CT

     FILE 'STNGUIDE' ENTERED AT 09:52:02 ON 19 SEP 2005
L*** DEL      0 S "PLANT HORMONES"+PFT,NT/CT

     FILE 'HCAPLUS' ENTERED AT 09:52:40 ON 19 SEP 2005
L13        7980 SEA ABB=ON  PLU=ON  "PLANT HORMONES"+PFT,NT/CT
L14       29172 SEA ABB=ON  PLU=ON  "PLANT HORMONES AND REGULATORS"+PFT,NT/CT
L15       12518 SEA ABB=ON  PLU=ON  "PLANT REGULATORS"+PFT,NT/CT
L16      131837 SEA ABB=ON  PLU=ON  AMINES+PFT/CT
L17       15649 SEA ABB=ON  PLU=ON  "AMINES, USES"+PFT,NT/CT
L18       11839 SEA ABB=ON  PLU=ON  "AMINES, USES AND MISCELLANEOUS"+PFT,NT/CT

L19       37355 SEA ABB=ON  PLU=ON  "QUATERNARY AMMONIUM COMPOUNDS"+PFT/CT
L20        9858 SEA ABB=ON  PLU=ON  "QUATERNARY AMMONIUM COMPOUNDS, USES"+PFT,N
               T/CT

     FILE 'STNGUIDE' ENTERED AT 09:54:57 ON 19 SEP 2005

     FILE 'HCAPLUS' ENTERED AT 09:55:13 ON 19 SEP 2005
L21      230473 SEA ABB=ON  PLU=ON  SURFACTANTS+PFT,NT/CT
L22      114062 SEA ABB=ON  PLU=ON  "CAPILLARY-ACTIVE SUBSTANCES"+PFT,NT/CT
L23           0 SEA ABB=ON  PLU=ON  "SURFACE-ACTIVE SUBSTANCES (CAPILLARY- OR
               INTERFACE-ACTIVE SUBSTANCES"+PFT,NT/CT
L24           0 SEA ABB=ON  PLU=ON  "SURFACE-ACTIVE SUBSTANCES (CAPILLARY- OR
               INTERFACE- ACTIVE SUBSTANCES"+PFT,NT/CT

     FILE 'STNGUIDE' ENTERED AT 09:56:23 ON 19 SEP 2005

     FILE 'HCAPLUS' ENTERED AT 09:57:51 ON 19 SEP 2005

     FILE 'STNGUIDE' ENTERED AT 09:58:02 ON 19 SEP 2005

     FILE 'HCAPLUS' ENTERED AT 09:58:21 ON 19 SEP 2005
L25       13968 SEA ABB=ON  PLU=ON  L9
L26         545 SEA ABB=ON  PLU=ON  62-49-7D? OR 67-48-1D?

     FILE 'STNGUIDE' ENTERED AT 09:58:57 ON 19 SEP 2005

     FILE 'REGISTRY' ENTERED AT 09:59:01 ON 19 SEP 2005
L27        1072 SEA ABB=ON  PLU=ON  (62-49-7 OR 67-48-1)/RN,CRN
               SAVE TEMP L27 QAZ225REGC/A

     FILE 'STNGUIDE' ENTERED AT 09:59:50 ON 19 SEP 2005

     FILE 'HCAPLUS' ENTERED AT 10:00:01 ON 19 SEP 2005
L28       15672 SEA ABB=ON  PLU=ON  L27
L29         251 SEA ABB=ON  PLU=ON  ((L25 OR L26 OR L27 OR L28) OR (L17 OR L18
               OR L19 OR L20)) AND (L12 OR L13 OR L14 OR L15)
L30        1614 SEA ABB=ON  PLU=ON  ((L25 OR L26 OR L27 OR L28) OR (L17 OR L18
               OR L19 OR L20)) AND (AGROCHEMICAL BIOREGULATORS)/SC,SX
L31           4 SEA ABB=ON  PLU=ON  ((L25 OR L26 OR L27 OR L28) OR (L17 OR L18
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              OR L19 OR L20)) (L) L8
L32           5 SEA ABB=ON  PLU=ON  (L29 OR L30) AND L8
              D SCAN

     FILE 'STNGUIDE' ENTERED AT 10:02:27 ON 19 SEP 2005

     FILE 'HCAPLUS' ENTERED AT 10:02:57 ON 19 SEP 2005
L33           5 SEA ABB=ON  PLU=ON  (L31 OR L32)
L34       38426 SEA ABB=ON  PLU=ON  L11

     FILE 'REGISTRY' ENTERED AT 10:04:10 ON 19 SEP 2005
              SELECT L11 1- RN
L35         250 SEA ABB=ON  PLU=ON  (10124-37-5/RN,CRN OR 15245-12-2/RN,CRN OR
              15978-77-5/RN,CRN OR 316373-41-8/RN,CRN OR 6484-52-2/RN,CRN OR
              73376-28-0/RN,CRN OR 7757-79-1/RN,CRN)
              SAVE TEMP L35 QAZ225REGD/A

     FILE 'STNGUIDE' ENTERED AT 10:05:21 ON 19 SEP 2005

     FILE 'HCAPLUS' ENTERED AT 10:05:26 ON 19 SEP 2005
L36       38763 SEA ABB=ON  PLU=ON  L35
L37          20 SEA ABB=ON  PLU=ON  (L29 OR L30 OR L31) AND (L34 OR L36)
L38          15 SEA ABB=ON  PLU=ON  L37 NOT L33
              D SCAN

     FILE 'STNGUIDE' ENTERED AT 10:06:50 ON 19 SEP 2005

     FILE 'HCAPLUS' ENTERED AT 10:09:45 ON 19 SEP 2005
L39          12 SEA ABB=ON  PLU=ON  L38 AND (AGROCHEMICAL BIOREGULATORS)/SC
L40         434 SEA ABB=ON  PLU=ON  (L34 OR L36) AND (L12 OR L13 OR L14 OR
              L15)
L41          12 SEA ABB=ON  PLU=ON  (L34 OR L36) AND L8
              D SCAN

     FILE 'STNGUIDE' ENTERED AT 10:11:52 ON 19 SEP 2005
              D QUE L8

     FILE 'HCAPLUS' ENTERED AT 10:13:42 ON 19 SEP 2005
L42           QUE ABB=ON  PLU=ON  (REST OR DORMANT OR DORMANC?)(5A) (BREAK?
              OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT? )

     FILE 'STNGUIDE' ENTERED AT 10:13:57 ON 19 SEP 2005

     FILE 'HCAPLUS' ENTERED AT 10:15:00 ON 19 SEP 2005
L43          51 SEA ABB=ON  PLU=ON  (L34 OR L36) AND L42
L44          24 SEA ABB=ON  PLU=ON  (L34 OR L36) (L) L42
L45           9 SEA ABB=ON  PLU=ON  (L25 OR L26 OR L28 OR (L17 OR L18 OR L19
              OR L20)) AND L42
L46           5 SEA ABB=ON  PLU=ON  (L21 OR L22 OR L23 OR L24) AND L42
L47           6 SEA ABB=ON  PLU=ON  L43 AND L45
L48           0 SEA ABB=ON  PLU=ON  L43 AND L46
L49          33 SEA ABB=ON  PLU=ON  (L44 OR L45 OR L46)
              D SCAN TI HIT

     FILE 'STNGUIDE' ENTERED AT 10:17:38 ON 19 SEP 2005

     FILE 'HCAPLUS' ENTERED AT 10:20:44 ON 19 SEP 2005
L50          44 SEA ABB=ON  PLU=ON  L49 OR L33 OR L39
L51          47 SEA ABB=ON  PLU=ON  L50 OR L41
L52          47 SEA ABB=ON  PLU=ON  L51 AND (L5 OR L6 OR L7 OR L8 OR L42)
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L53          35 SEA ABB=ON  PLU=ON  L52 AND (AY<2000 OR PY<2000 OR PRY<2000)

     FILE 'STNGUIDE' ENTERED AT 10:22:18 ON 19 SEP 2005

     FILE 'HCAPLUS' ENTERED AT 10:22:51 ON 19 SEP 2005
                SAVE TEMP L53 QAZ225HCA1B/A
L54          12 SEA ABB=ON  PLU=ON  L52 NOT L53
                SAVE TEMP L54 QAZ225HCA1A/A

     FILE 'STNGUIDE' ENTERED AT 10:23:33 ON 19 SEP 2005
                D SAVED

     FILE 'HCAPLUS' ENTERED AT 10:24:34 ON 19 SEP 2005
L55           4 SEA ABB=ON  PLU=ON  L53 AND AKZO/CS,SO,PA

     FILE 'STNGUIDE' ENTERED AT 10:24:49 ON 19 SEP 2005

     FILE 'MEDLINE' ENTERED AT 10:37:04 ON 19 SEP 2005
L56         502 SEA ABB=ON  PLU=ON  (REST OR DORMANT OR DORMANC?)(5A) (BREAK?
                OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT? )
                D TRI 1-4
                D IBIB ED AB L56 2
L57          54 SEA ABB=ON  PLU=ON  L56 AND (PLANT OR FRUIT OR TREE)
                D TRI 1-5
                D TRI 6-10

     FILE 'STNGUIDE' ENTERED AT 10:41:38 ON 19 SEP 2005

     FILE 'HCAPLUS' ENTERED AT 10:42:43 ON 19 SEP 2005
L58             QUE ABB=ON  PLU=ON  PLANT? OR TREE? OR FRUIT? OR SEED? OR
                LEAF? OR LEAVES? OR ROOT? OR GRAPE? OR APPLE?

     FILE 'STNGUIDE' ENTERED AT 10:42:53 ON 19 SEP 2005

     FILE 'MEDLINE' ENTERED AT 10:43:04 ON 19 SEP 2005

     FILE 'REGISTRY' ENTERED AT 10:43:40 ON 19 SEP 2005
L59          33 SEA ABB=ON  PLU=ON  L27 AND (MEDLINE OR EMBASE OR BIOSIS OR
                CROPU OR CROPB OR AGRICOLA)/LC
L60          11 SEA ABB=ON  PLU=ON  L35 AND (MEDLINE OR EMBASE OR BIOSIS OR
                CROPU OR CROPB OR AGRICOLA)/LC

     FILE 'MEDLINE' ENTERED AT 10:44:47 ON 19 SEP 2005

     FILE 'HCAPLUS' ENTERED AT 10:44:52 ON 19 SEP 2005
                SET SMARTSELECT ON
                SET SMARTSELECT OFF

     FILE 'MEDLINE' ENTERED AT 10:44:56 ON 19 SEP 2005

     FILE 'REGISTRY' ENTERED AT 10:45:16 ON 19 SEP 2005
                SET SMARTSELECT ON
L61             SEL PLU=ON  L59 1- CHEM :     170 TERMS
                SET SMARTSELECT OFF

     FILE 'MEDLINE' ENTERED AT 10:45:20 ON 19 SEP 2005
L62        30633 SEA ABB=ON  PLU=ON  L61

     FILE 'REGISTRY' ENTERED AT 10:46:07 ON 19 SEP 2005
                SET SMARTSELECT ON
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L63             SEL PLU=ON  L60 1- CHEM :      84 TERMS
                SET SMARTSELECT OFF

     FILE 'MEDLINE' ENTERED AT 10:46:09 ON 19 SEP 2005
L64     1283625 SEA ABB=ON  PLU=ON  L63
L65          89 SEA ABB=ON  PLU=ON  (L64 OR L6) AND L42
L66          29 SEA ABB=ON  PLU=ON  (L62 OR L5) AND L42
L67           3 SEA ABB=ON  PLU=ON  L65 AND L66
L68           0 SEA ABB=ON  PLU=ON  L65 AND L7
L69           2 SEA ABB=ON  PLU=ON  L66 AND L7

     FILE 'STNGUIDE' ENTERED AT 10:47:56 ON 19 SEP 2005

     FILE 'MEDLINE' ENTERED AT 10:48:03 ON 19 SEP 2005
                D TRI L67 1-3
L70          16 SEA ABB=ON  PLU=ON  (L65 OR L66) AND L58
                D TRI 1-16

     FILE 'STNGUIDE' ENTERED AT 10:49:34 ON 19 SEP 2005
                D QUE

     FILE 'MEDLINE' ENTERED AT 10:51:43 ON 19 SEP 2005
L71          15 SEA ABB=ON  PLU=ON  L70 NOT ATHLETES/TI
L72           4 SEA ABB=ON  PLU=ON  L71 AND (PY<2000 OR MY<2000)
                SAVE TEMP L72 QAZ225MED1B/A
L73          11 SEA ABB=ON  PLU=ON  L71 NOT L72
                SAVE TEMP L73 QAZ225MED1A/A

     FILE 'STNGUIDE' ENTERED AT 10:53:13 ON 19 SEP 2005
                D SAVED

     FILE 'REGISTRY' ENTERED AT 11:27:26 ON 19 SEP 2005

     FILE 'EMBASE' ENTERED AT 11:27:37 ON 19 SEP 2005

     FILE 'HCAPLUS' ENTERED AT 11:27:47 ON 19 SEP 2005
                SET SMARTSELECT ON
                SET SMARTSELECT OFF

     FILE 'EMBASE' ENTERED AT 11:27:51 ON 19 SEP 2005

     FILE 'REGISTRY' ENTERED AT 11:28:16 ON 19 SEP 2005
                SET SMARTSELECT ON
L74             SEL PLU=ON  L60 1- CHEM :      84 TERMS
                SET SMARTSELECT OFF

     FILE 'EMBASE' ENTERED AT 11:28:18 ON 19 SEP 2005
L75     1209621 SEA ABB=ON  PLU=ON  L74

     FILE 'STNGUIDE' ENTERED AT 11:28:53 ON 19 SEP 2005

     FILE 'EMBASE' ENTERED AT 11:29:10 ON 19 SEP 2005

     FILE 'REGISTRY' ENTERED AT 11:29:16 ON 19 SEP 2005
                SET SMARTSELECT ON
L76             SEL PLU=ON  L59 1- CHEM :     170 TERMS
                SET SMARTSELECT OFF

     FILE 'EMBASE' ENTERED AT 11:29:20 ON 19 SEP 2005
L77       26770 SEA ABB=ON  PLU=ON  L76
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L78          431 SEA ABB=ON  PLU=ON  (REST OR DORMANT OR DORMANC?)(5A) (BREAK?
                 OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT? )
                 D TRI 1-5

     FILE 'STNGUIDE' ENTERED AT 11:30:10 ON 19 SEP 2005

     FILE 'EMBASE' ENTERED AT 11:30:27 ON 19 SEP 2005
L79           30 SEA ABB=ON  PLU=ON  L42 AND L58
                 D TRI 1-5

     FILE 'STNGUIDE' ENTERED AT 11:30:42 ON 19 SEP 2005

     FILE 'EMBASE' ENTERED AT 11:31:13 ON 19 SEP 2005
L80           75 SEA ABB=ON  PLU=ON  L78 AND L75
                 D TRI 1-5
L81            1 SEA ABB=ON  PLU=ON  L77 AND L78
L82           15 SEA ABB=ON  PLU=ON  L78 AND (L6 OR L7 OR L5)
L83            5 SEA ABB=ON  PLU=ON  (L80 OR L81 OR L82) AND (L58 OR FLOWER? OR
                 BLOOM? OR BUD? OR BLOSSOM? OR SHOOT?)
                 D TRI 1-5

     FILE 'STNGUIDE' ENTERED AT 11:33:39 ON 19 SEP 2005

     FILE 'EMBASE' ENTERED AT 11:34:45 ON 19 SEP 2005
L84            3 SEA ABB=ON  PLU=ON  L83 NOT (ATHLETES OR HOUSEKEEPING)/TI
L85            3 SEA ABB=ON  PLU=ON  L84 AND (PY<2000 OR MY<2000)
                 SAVE TEMP L85 QAZ225EMB1B/A

     FILE 'STNGUIDE' ENTERED AT 11:35:46 ON 19 SEP 2005
                 D QUE

     FILE 'HCAPLUS' ENTERED AT 11:36:02 ON 19 SEP 2005
L86              QUE ABB=ON  PLU=ON  FLOWER? OR BLOOM? OR BUD? OR BLOSSOM? OR
                 SHOOT?

     FILE 'STNGUIDE' ENTERED AT 11:36:08 ON 19 SEP 2005

     FILE 'REGISTRY' ENTERED AT 11:36:21 ON 19 SEP 2005
L87           30 SEA ABB=ON  PLU=ON  L27 AND (CABA OR AGRICOLA OR BIOSIS)/LC
L88           11 SEA ABB=ON  PLU=ON  L35 AND (CABA OR AGRICOLA OR BIOSIS)/LC

     FILE 'STNGUIDE' ENTERED AT 11:37:09 ON 19 SEP 2005

     FILE 'BIOSIS, AGRICOLA, CABA' ENTERED AT 11:37:33 ON 19 SEP 2005

     FILE 'REGISTRY' ENTERED AT 11:37:47 ON 19 SEP 2005
                 SET SMARTSELECT ON
L89              SEL PLU=ON  L88 1- CHEM :       84 TERMS
                 SET SMARTSELECT OFF

     FILE 'BIOSIS, AGRICOLA, CABA' ENTERED AT 11:37:48 ON 19 SEP 2005
L90        1533573 SEA ABB=ON  PLU=ON  L89

     FILE 'REGISTRY' ENTERED AT 11:38:49 ON 19 SEP 2005
                 SET SMARTSELECT ON
L91              SEL PLU=ON  L87 1- CHEM :      165 TERMS
                 SET SMARTSELECT OFF

     FILE 'BIOSIS, AGRICOLA, CABA' ENTERED AT 11:38:52 ON 19 SEP 2005
L92          63238 SEA ABB=ON  PLU=ON  L91
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L93          894 SEA ABB=ON  PLU=ON  L42 AND (L90 OR L6)
L94          227 SEA ABB=ON  PLU=ON  L42 AND (L92 OR L5)
L95           11 SEA ABB=ON  PLU=ON  L93 AND L7
L96            2 SEA ABB=ON  PLU=ON  L94 AND L7
L97           11 SEA ABB=ON  PLU=ON  L95 OR L96
                 D SCAN
L98           64 SEA ABB=ON  PLU=ON  L93 AND L94
L99           64 SEA ABB=ON  PLU=ON  L98 AND (L58 OR L86)
L100          40 SEA ABB=ON  PLU=ON  L99 AND (REST OR RESTING OR DORMANT OR
                 DORMANCY)/TI,IT,ST,CC,CT,STP

     FILE 'STNGUIDE' ENTERED AT 11:45:55 ON 19 SEP 2005

     FILE 'BIOSIS, AGRICOLA, CABA' ENTERED AT 11:51:54 ON 19 SEP 2005
L101          49 SEA ABB=ON  PLU=ON  L97 OR L100
L102          42 DUP REM L101 (7 DUPLICATES REMOVED)
                      ANSWERS '1-11' FROM FILE BIOSIS
                      ANSWERS '12-13' FROM FILE AGRICOLA
                      ANSWERS '14-42' FROM FILE CABA
L103          34 SEA ABB=ON  PLU=ON  L102 AND (AY<2000 OR PY<2000 OR PRY<2000
                 OR MY<2000)
                 SAVE TEMP L103 QAZ225MUL1B/A
L104           8 SEA ABB=ON  PLU=ON  L102 NOT L103
                 SAVE TEMP L104 QAZ225MUL1A/A

     FILE 'STNGUIDE' ENTERED AT 11:54:07 ON 19 SEP 2005
                 D SAVED

     FILE 'PASCAL, JICST-EPLUS, FROSTI, FSTA, CROPU, CROPB, SCISEARCH' ENTERED
     AT 11:55:20 ON 19 SEP 2005
L105         102 SEA ABB=ON  PLU=ON  L42 AND L6
L106         166 SEA ABB=ON  PLU=ON  L42 AND L5
L107          16 SEA ABB=ON  PLU=ON  L42 AND L7
L108           6 SEA ABB=ON  PLU=ON  ((L105 OR L106)) AND L7
L109          16 SEA ABB=ON  PLU=ON  L107 OR L108
L110          16 SEA ABB=ON  PLU=ON  L105 AND L106
                 D QUE
L111          27 SEA ABB=ON  PLU=ON  (L109 OR L110)
L112          14 SEA ABB=ON  PLU=ON  L111 AND (AY<2000 OR PY<2000 OR PRY<2000
                 OR MY<2000)
L113          13 DUP REM L112 (1 DUPLICATE REMOVED)
                      ANSWERS '1-4' FROM FILE PASCAL
                      ANSWERS '5-8' FROM FILE JICST-EPLUS
                      ANSWERS '9-10' FROM FILE FSTA
                      ANSWERS '11-12' FROM FILE CROPB
                      ANSWER '13' FROM FILE SCISEARCH
                 SAVE TEMP L113 QAZ225MUL2B/A
L114           4 SEA ABB=ON  PLU=ON  L111 NOT L112
L115           2 DUP REM L114 (2 DUPLICATES REMOVED)
                      ANSWERS '1-2' FROM FILE PASCAL
                 SAVE TEMP L115 QAZ225MUL2A/A

     FILE 'STNGUIDE' ENTERED AT 12:06:44 ON 19 SEP 2005
                 D SAVED

     FILE 'WPIX' ENTERED AT 12:07:23 ON 19 SEP 2005
                 D QUE L42
L116         565 SEA ABB=ON  PLU=ON  ((REST OR RESTING? OR DORMANT OR DORMANC?)(
                 5A) (BREAK? OR ?DISRUPT? OR ?INTERRUPT? OR ?TERMINAT?))/BIX
L117        8883 SEA ABB=ON  PLU=ON  (B05-C01 OR B05-C02 OR C05-C01 OR C05-C02)/
```

```
                MC
L118        5915 SEA ABB=ON  PLU=ON  (B12-M09 OR C12-M09)/MC
L119        4479 SEA ABB=ON  PLU=ON  (B12-U01 OR B12-P01 OR C12-U01 OR C12-P01)/
                MC
L120          37 SEA ABB=ON  PLU=ON  (L116 OR L119) AND L117
L121          23 SEA ABB=ON  PLU=ON  L120 AND (?AMMONIA?/BIX OR ?AMMONIUM?/BIX
                OR ?CHOLINE?/BIX OR ?ETHANIMINE?/BIX OR (?ETHYLENE/BIX (1A)
                DIAMIN?/BIX) OR EN/BIX)
L122           6 SEA ABB=ON  PLU=ON  L121 AND ((?SURFACTANT?/BIX OR ARMOBLEN/BIX
                 OR ARMOBREAK/BIX OR BEROL/BIX OR (SURFACE/BIX (1W) AGENT/BIX))
                 OR L118)
                D TRI 1-6
                D QUE L116
L123           2 SEA ABB=ON  PLU=ON  L116 AND L117
L124           9 SEA ABB=ON  PLU=ON  L116 AND (?AMMONIA?/BIX OR ?AMMONIUM?/BIX
                OR ?CHOLINE?/BIX OR ?ETHANIMINE?/BIX OR (?ETHYLENE/BIX (1A)
                DIAMIN?/BIX) OR EN/BIX)
L125           4 SEA ABB=ON  PLU=ON  L116 AND (?NITRAT?/BIX)
L126           4 SEA ABB=ON  PLU=ON  L123 OR L125
L127           1 SEA ABB=ON  PLU=ON  L116 AND L118
L128           9 SEA ABB=ON  PLU=ON  (L123 OR L124 OR L125 OR L126 OR L127)
                D TRI 1-9
L129        7543 SEA ABB=ON  PLU=ON  (C10-A22 OR B10-A22)/MC
L130           4 SEA ABB=ON  PLU=ON  L116 AND L129
L131          10 SEA ABB=ON  PLU=ON  L128 OR L130
L132           9 SEA ABB=ON  PLU=ON  L131 AND (AY<2000 OR PY<2000 OR PRY<2000)
                SAVE TEMP L132 QAZ225WPI1B/A
L133           1 SEA ABB=ON  PLU=ON  L131 NOT L132
                SAVE TEMP L133 QAZ225WPI1A/A

     FILE 'STNGUIDE' ENTERED AT 12:31:20 ON 19 SEP 2005
                D SAVED

     FILE 'HCAPLUS, MEDLINE, EMBASE, BIOSIS, CABA, AGRICOLA, FROSTI, FSTA,
     PASCAL, JICST-EPLUS, CROPU, CROPB, SCISEARCH, WPIX, CONF, CONFSCI,
     DISSABS' ENTERED AT 12:41:35 ON 19 SEP 2005
L134        2514 SEA ABB=ON  PLU=ON  MCDONALD, B?/AU
L135           6 SEA ABB=ON  PLU=ON  MC DONALD, B?/AU
L136          19 SEA ABB=ON  PLU=ON  WORKEL, H?/AU
L137           3 SEA ABB=ON  PLU=ON  (L134 OR L135 OR L136) AND L42
L138         381 SEA ABB=ON  PLU=ON  (L134 OR L135 OR L136) AND (L58 OR L86)
L139           2 SEA ABB=ON  PLU=ON  L138 AND AKZO?/PA,CS,SO
L140           2 SEA ABB=ON  PLU=ON  L137 OR L139

     FILE 'STNGUIDE' ENTERED AT 12:46:55 ON 19 SEP 2005

     FILE 'HCAPLUS, MEDLINE, EMBASE, BIOSIS, CABA, AGRICOLA, FROSTI, FSTA,
     PASCAL, JICST-EPLUS, CROPU, CROPB, SCISEARCH, WPIX, CONF, CONFSCI,
     DISSABS' ENTERED AT 12:47:07 ON 19 SEP 2005
L141        2514 SEA ABB=ON  PLU=ON  MCDONALD, B?/AU
L142           6 SEA ABB=ON  PLU=ON  MC DONALD, B?/AU
L143          19 SEA ABB=ON  PLU=ON  WORKEL, H?/AU
L144         360 SEA ABB=ON  PLU=ON  (L141 OR L142 OR L143) AND (L42 OR L58 OR
                L86)
                D IBIB L137 1
                D QUE L137
                D IBIB ED AB L137 1-3
                D QUE L139
                D IBIB ED AB L139 1-2
```

```
     FILE 'STNGUIDE' ENTERED AT 12:53:46 ON 19 SEP 2005

     FILE 'HCAPLUS, BIOSIS, CABA, AGRICOLA, CROPU, CROPB, WPIX' ENTERED AT
     12:57:08 ON 19 SEP 2005
L145         981 SEA ABB=ON  PLU=ON  MCDONALD, B?/AU
L146           2 SEA ABB=ON  PLU=ON  MC DONALD, B?/AU
L147          15 SEA ABB=ON  PLU=ON  WORKEL, H?/AU
L148           3 SEA ABB=ON  PLU=ON  (L145 OR L146 OR L147) AND L42
L149         246 SEA ABB=ON  PLU=ON  (L145 OR L146 OR L147) AND ((L58 OR L86)
                 OR AKZO/SO,CS,PA)
L150           7 SEA ABB=ON  PLU=ON  L149 AND AKZO/SO,CS,PA
L151           7 SEA ABB=ON  PLU=ON  L148 OR L150
                 D QUE L151
                 D IBIB ED AB L151 1-7

     FILE 'STNGUIDE' ENTERED AT 13:00:26 ON 19 SEP 2005

     FILE 'REGISTRY' ENTERED AT 13:01:49 ON 19 SEP 2005

     FILE 'ZCAPLUS' ENTERED AT 13:01:51 ON 19 SEP 2005

     FILE 'HCAPLUS' ENTERED AT 13:01:54 ON 19 SEP 2005

     FILE 'MEDLINE' ENTERED AT 13:01:57 ON 19 SEP 2005

     FILE 'EMBASE' ENTERED AT 13:02:01 ON 19 SEP 2005

     FILE 'BIOSIS' ENTERED AT 13:02:04 ON 19 SEP 2005

     FILE 'CABA' ENTERED AT 13:02:08 ON 19 SEP 2005

     FILE 'AGRICOLA' ENTERED AT 13:02:13 ON 19 SEP 2005

     FILE 'FROSTI' ENTERED AT 13:02:21 ON 19 SEP 2005

     FILE 'FSTA' ENTERED AT 13:02:25 ON 19 SEP 2005

     FILE 'PASCAL' ENTERED AT 13:02:30 ON 19 SEP 2005

     FILE 'JICST-EPLUS' ENTERED AT 13:02:33 ON 19 SEP 2005

     FILE 'CROPU' ENTERED AT 13:02:37 ON 19 SEP 2005

     FILE 'CROPB' ENTERED AT 13:02:42 ON 19 SEP 2005

     FILE 'SCISEARCH' ENTERED AT 13:02:49 ON 19 SEP 2005

     FILE 'WPIX' ENTERED AT 13:02:53 ON 19 SEP 2005

     FILE 'CONF' ENTERED AT 13:02:57 ON 19 SEP 2005

     FILE 'CONFSCI' ENTERED AT 13:03:01 ON 19 SEP 2005

     FILE 'DISSABS' ENTERED AT 13:03:05 ON 19 SEP 2005

     FILE 'STNGUIDE' ENTERED AT 13:03:07 ON 19 SEP 2005
               D QUE STAT L53
               D QUE STAT L54
               D QUE STAT L72
               D QUE STAT L73
```

```
              D QUE STAT L85
              D QUE STAT L103
              D QUE STAT L104
              D QUE STAT L113
              D QUE STAT L115
              D QUE L132
              D QUE L133

     FILE 'HCAPLUS, MEDLINE, EMBASE, BIOSIS, AGRICOLA, CABA, WPIX, PASCAL,
     JICST-EPLUS, FSTA, CROPB, SCISEARCH' ENTERED AT 13:05:25 ON 19 SEP 2005
L152         89 DUP REM L53 L72 L85 L103 L132 L113 (9 DUPLICATES REMOVED)
                    ANSWERS '1-35' FROM FILE HCAPLUS
                    ANSWERS '36-39' FROM FILE MEDLINE
                    ANSWERS '40-42' FROM FILE EMBASE
                    ANSWERS '43-51' FROM FILE BIOSIS
                    ANSWERS '52-53' FROM FILE AGRICOLA
                    ANSWERS '54-74' FROM FILE CABA
                    ANSWERS '75-78' FROM FILE WPIX
                    ANSWERS '79-81' FROM FILE PASCAL
                    ANSWERS '82-85' FROM FILE JICST-EPLUS
                    ANSWER '86' FROM FILE FSTA
                    ANSWERS '87-88' FROM FILE CROPB
                    ANSWER '89' FROM FILE SCISEARCH
L153         33 DUP REM L54 L73 L104 L133 L115 (1 DUPLICATE REMOVED)
                    ANSWERS '1-12' FROM FILE HCAPLUS
                    ANSWERS '13-23' FROM FILE MEDLINE
                    ANSWER '24' FROM FILE BIOSIS
                    ANSWERS '25-30' FROM FILE CABA
                    ANSWER '31' FROM FILE WPIX
                    ANSWERS '32-33' FROM FILE PASCAL

     FILE 'STNGUIDE' ENTERED AT 13:06:46 ON 19 SEP 2005

     FILE 'HCAPLUS, MEDLINE, EMBASE, BIOSIS, AGRICOLA, CABA, PASCAL,
     JICST-EPLUS, FSTA, CROPB, SCISEARCH, WPIX' ENTERED AT 13:06:59 ON 19 SEP
     2005
              D L152 IBIB ED AB HITIND

     FILE 'STNGUIDE' ENTERED AT 13:07:00 ON 19 SEP 2005

     FILE 'HCAPLUS, MEDLINE, EMBASE, BIOSIS, AGRICOLA, CABA, PASCAL,
     JICST-EPLUS, FSTA, CROPB, SCISEARCH, WPIX' ENTERED AT 13:07:29 ON 19 SEP
     2005
              D L152 IBIB ED AB HITIND 2-35

     FILE 'STNGUIDE' ENTERED AT 13:07:32 ON 19 SEP 2005

     FILE 'HCAPLUS, MEDLINE, EMBASE, BIOSIS, AGRICOLA, CABA, PASCAL,
     JICST-EPLUS, FSTA, CROPB, SCISEARCH, WPIX' ENTERED AT 13:08:29 ON 19 SEP
     2005
              D L152 IBIB ED AB HITIND 36-74

     FILE 'STNGUIDE' ENTERED AT 13:08:31 ON 19 SEP 2005

     FILE 'HCAPLUS, MEDLINE, EMBASE, BIOSIS, AGRICOLA, CABA, PASCAL,
     JICST-EPLUS, FSTA, CROPB, SCISEARCH, WPIX' ENTERED AT 13:09:22 ON 19 SEP
     2005
              D L152 IALL ABEQ TECH ABEX 75-78

     FILE 'STNGUIDE' ENTERED AT 13:09:25 ON 19 SEP 2005
```

FILE 'HCAPLUS, MEDLINE, EMBASE, BIOSIS, AGRICOLA, CABA, PASCAL, JICST-EPLUS, FSTA, CROPB, SCISEARCH, WPIX' ENTERED AT 13:09:50 ON 19 SEP 2005
D L152 IBIB ED AB HITIND 79-

FILE 'STNGUIDE' ENTERED AT 13:10:08 ON 19 SEP 2005

FILE 'HCAPLUS, MEDLINE, BIOSIS, CABA, PASCAL, WPIX' ENTERED AT 13:10:50 ON 19 SEP 2005
D L153 IBIB ED AB HITIND 1-12

FILE 'STNGUIDE' ENTERED AT 13:10:52 ON 19 SEP 2005

FILE 'HCAPLUS, MEDLINE, BIOSIS, CABA, PASCAL, WPIX' ENTERED AT 13:11:28 ON 19 SEP 2005
D L153 IBIB ED AB HITIND 13-30

FILE 'STNGUIDE' ENTERED AT 13:11:29 ON 19 SEP 2005

FILE 'HCAPLUS, MEDLINE, BIOSIS, CABA, PASCAL, WPIX' ENTERED AT 13:12:06 ON 19 SEP 2005
D L153 IALL ABEQ TECH ABEX 31

FILE 'STNGUIDE' ENTERED AT 13:12:08 ON 19 SEP 2005

FILE 'HCAPLUS, MEDLINE, BIOSIS, CABA, PASCAL, WPIX' ENTERED AT 13:12:28 ON 19 SEP 2005
D L153 IBIB ED AB HIT 32-

FILE 'STNGUIDE' ENTERED AT 13:12:31 ON 19 SEP 2005

FILE 'STNGUIDE' ENTERED AT 13:12:47 ON 19 SEP 2005
D QUE L53
D QUE L54
D QUE L72
D QUE L73
D QUE L85
D QUE L103
D QUE L104
D QUE L113
D QUE L115
D QUE L132
D QUE L133
D QUE L137
D QUE L139
D QUE L151

FILE HOME

FILE ZCAPLUS

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FILE COVERS 1907 - 19 Sep 2005 VOL 143 ISS 13
FILE LAST UPDATED: 18 Sep 2005 (20050918/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE HCAPLUS

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FILE LAST UPDATED: 18 Sep 2005 (20050918/ED)

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FILE STNGUIDE
FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Sep 16, 2005 (20050916/UP).

FILE WPIX
FILE LAST UPDATED: 15 SEP 2005 <20050915/UP>
MOST RECENT DERWENT UPDATE: 200559 <200559/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE, PLEASE VISIT:
http://www.stn-international.de/training_center/patents/stn_guide.pdf <<<

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE http://thomsonderwent.com/coverage/latestupdates/ <<<

>>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER GUIDES, PLEASE VISIT:
http://thomsonderwent.com/support/userguides/ <<<

>>> NEW! FAST-ALERTING ACCESS TO NEWLY-PUBLISHED PATENT DOCUMENTATION NOW AVAILABLE IN DERWENT WORLD PATENTS INDEX FIRST VIEW - FILE WPIFV.
FOR FURTHER DETAILS: http://www.thomsonderwent.com/dwpifv <<<

>>> THE CPI AND EPI MANUAL CODES HAVE BEEN REVISED FROM UPDATE 200501.
PLEASE CHECK:
http://thomsonderwent.com/support/dwpiref/reftools/classification/code-rev
FOR DETAILS. <<<

FILE REGISTRY
Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 18 SEP 2005 HIGHEST RN 863382-78-9
DICTIONARY FILE UPDATES: 18 SEP 2005 HIGHEST RN 863382-78-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

****
* *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
* *
****

Structure search iteration limits have been increased. See HELP SLIMITS for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

FILE MEDLINE
FILE LAST UPDATED: 17 SEP 2005 (20050917/UP). FILE COVERS 1950 TO DATE.

On December 19, 2004, the 2005 MeSH terms were loaded.

The MEDLINE reload for 2005 is now available. For details enter HELP RLOAD at an arrow promt (=>). See also:

http://www.nlm.nih.gov/mesh/
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html

OLDMEDLINE now back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE EMBASE
FILE COVERS 1974 TO 15 Sep 2005 (20050915/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE BIOSIS

FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 14 September 2005 (20050914/ED)

FILE RELOADED: 19 October 2003.

FILE AGRICOLA

FILE COVERS 1970 TO 22 Aug 2005 (20050822/ED)

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This file contains CAS Registry Numbers for easy and accurate
substance identification.

FILE CABA
FILE COVERS 1973 TO 2 Sep 2005 (20050902/ED)

This file contains CAS Registry Numbers for easy and accurate
substance identification.

The CABA file was reloaded 7 December 2003. Enter HELP RLOAD for details.

FILE PASCAL
FILE LAST UPDATED: 19 SEP 2005 <20050919/UP>
FILE COVERS 1977 TO DATE.

>>> SIMULTANEOUS LEFT AND RIGHT TRUNCATION IS AVAILABLE
IN THE BASIC INDEX (/BI) FIELD <<<

FILE JICST-EPLUS
FILE COVERS 1985 TO 13 SEP 2005 (20050913/ED)

THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED
TERM (/CT) THESAURUS RELOAD.

FILE FROSTI
FILE LAST UPDATED: 14 SEP 2005 <20050914/UP>
FILE COVERS 1972 TO DATE.

>>> SIMULTANEOUS LEFT AND RIGHT TRUNCATION IS AVAILABLE
IN THE BASIC INDEX (/BI) FIELD <<<

FILE FSTA
FILE LAST UPDATED: 19 SEP 2005 <20050919/UP>
FILE COVERS 1969 TO DATE.

FILE CROPU
FILE LAST UPDATED: 5 JAN 2004 <20040105/UP>
FILE COVERS 1985 TO 2003

>>> CROPU WILL NO LONGER BE UPDATED AS OF 2004 <<<

>>> EFFECTIVE JAN 1, 2004, THE 70% DISCOUNT FOR

DERWENT CROP PROTECTION SUBSCRIBERS WILL BE NO
LONGER VALID <<<

FILE CROPB
FILE LAST LOADED: 11 NOV 94 <941111/UP>
>>> EFFECTIVE JAN 1, 2004, THE 70% DISCOUNT FOR
DERWENT CROP PROTECTION SUBSCRIBERS WILL BE NO
LONGER VALID <<<

FILE SCISEARCH

FILE COVERS 1974 TO 15 Sep 2005 (20050915/ED)

SCISEARCH has been reloaded, see HELP RLOAD for details.

FILE CONF
FILE LAST UPDATED: 16 SEP 2005 <20050916/UP>
FILE COVERS 1976 TO DATE.

FILE CONFSCI
FILE COVERS 1973 TO 25 May 2005 (20050525/ED)

FILE DISSABS
FILE COVERS 1861 TO 26 AUG 2005 (20050826/ED)

=>